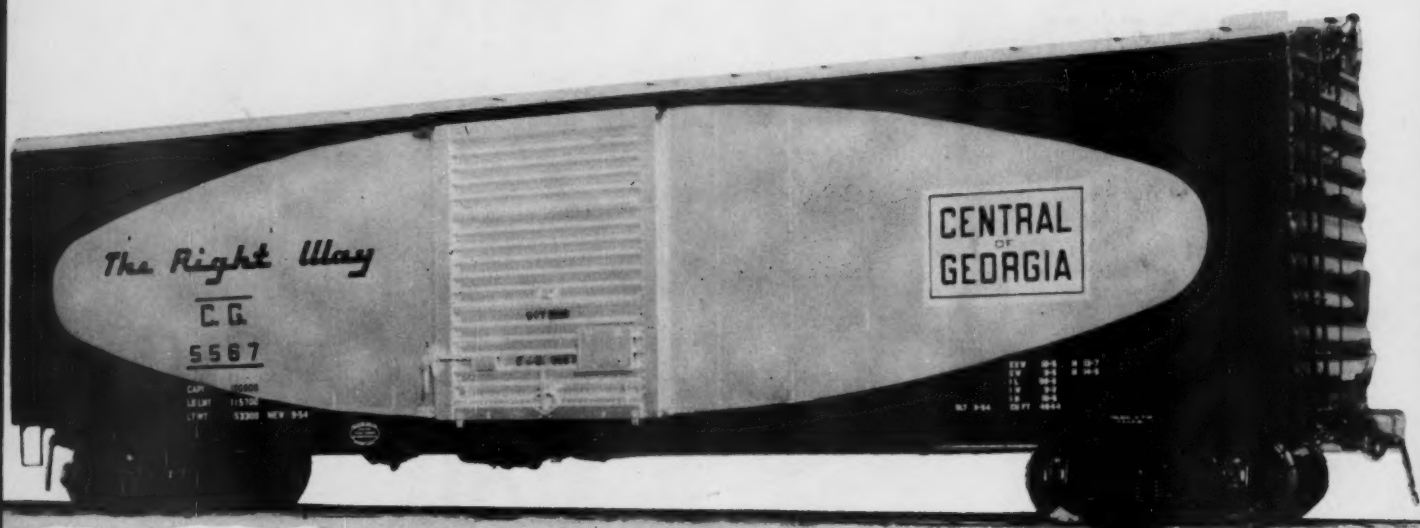


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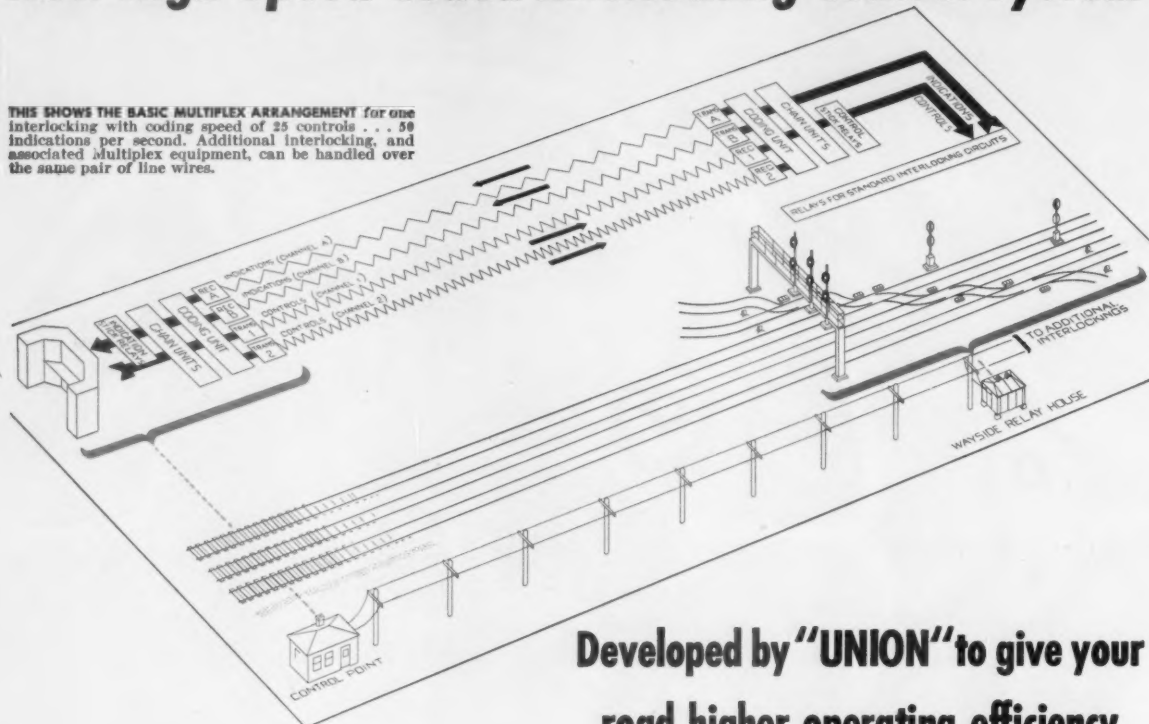
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February 7, 1955

Vol. 138, No. 6

Week at a Glance

Report of the President's Cabinet Committee on Transportation was still officially under cover when this issue went to press, despite considerable discussion around the subject at the annual meeting of the TAA. There are indications, however, that the report may go to Congress sometime this week; that it will be opposed, at least in part, by railroad competitors who want nothing that smacks of equality in transportation. **7**

Railroads which will profit most from the greater competitive freedom which may follow any lessening of regulation will be those which are prepared to move first and fastest, in the opinion of Monon President Warren Brown. **8**

Two new developments — General Railway Signal's "Syncroscan" and Westinghouse Air Brake's "AC" brake control valve—announced in a single week, point up the many ways in which the supply industry constantly helps railroads improve and refine their operations. **10**

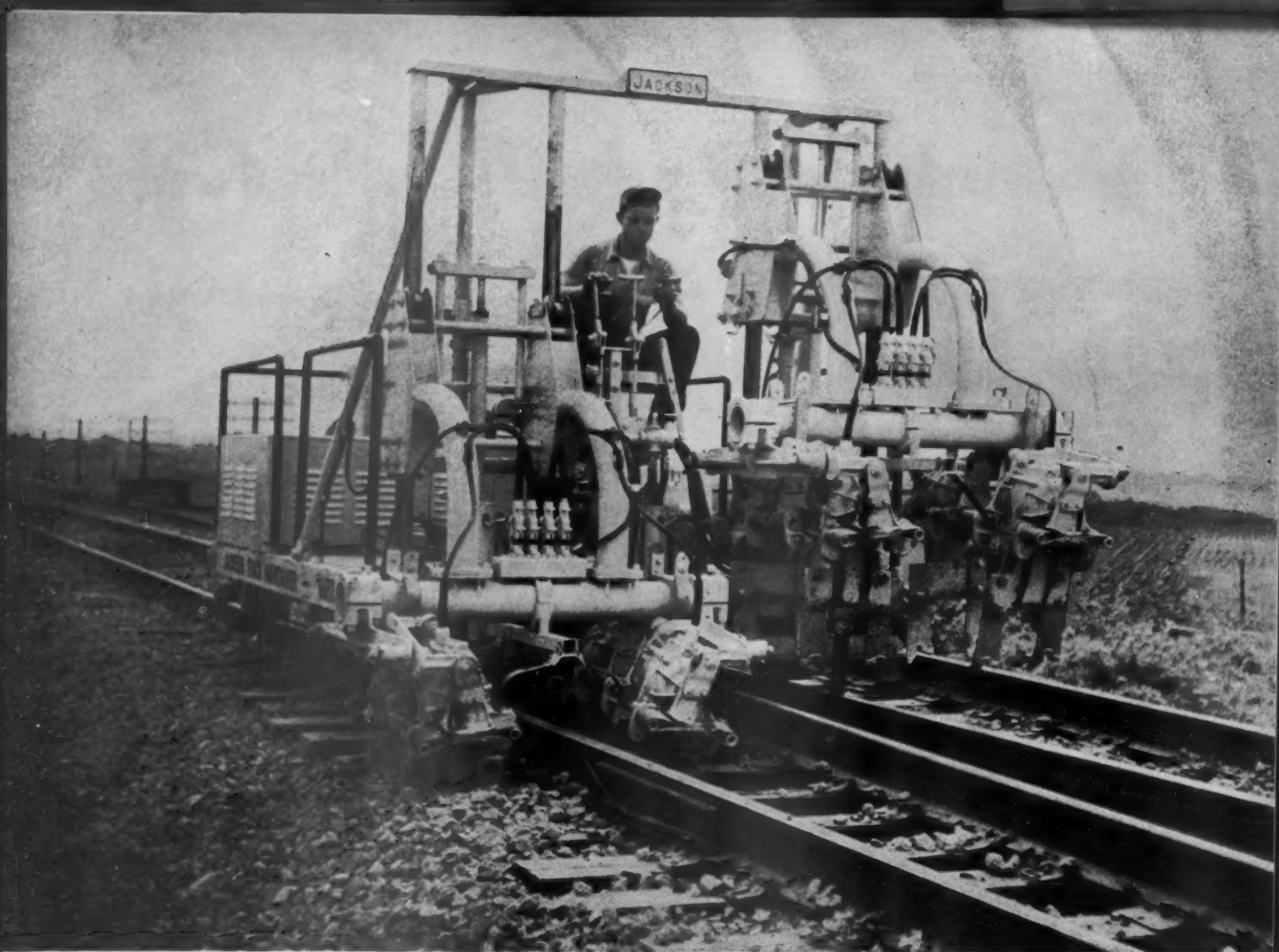
FORUM—Who has got the answer to the problem of competitive rates and traditional differentials? It isn't easy, but an answer must and will be found. **35**

Condition of locomotives — the 43rd annual report of the ICC Bureau of Locomotive Inspection for the year ended June 30, 1954. **36**

The Burlington's new freight terminal at Cicero, Ill., features:

- Combined rail-truck operations **37**
- Outstanding structural design **38**
- Smooth, coordinated freight handling **40**

What CTC did for the Dixie Line in reducing operating expenses, increasing track capacity, eliminating planned new trackage and expediting train movements. **42**



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Current Statistics

Operating revenues, eleven months	
1954	\$8,572,897,474
1943	9,848,917,002
Operating expenses, eleven months	
1954	\$6,755,791,805
1953	7,438,438,928
Taxes, eleven months	
1954	\$ 821,549,247
1953	1,162,856,463
Net railway operating income, eleven months	
1954	\$ 765,606,661
1953	1,031,517,291
Net income, estimated, eleven months	
1954	\$ 547,000,000
1953	799,000,000
Average price railroad stocks	
February 1, 1955	86.05
February 2, 1954	61.40
Carloadings, revenue freight	
Three weeks, 1955	1,882,796
Three weeks, 1954	1,861,313
Average daily freight car surplus	
Wk. ended January 29, 1955	65,781
Wk. ended January 30, 1954	107,185
Average daily freight car shortage	
Wk. ended January 29, 1955	603
Wk. ended January 30, 1954	691
Freight cars on order	
January 1, 1955	15,317
January 1, 1954	29,950
Freight cars delivered	
December 1954	2,173
December 1953	4,456

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Week at a glance CONTINUED

Many freight cars are too "common"; shippers need cars with "uncommon" qualities to meet special requirements, in the opinion of U. S. Steel's D. M. Morewood. 44

Servicing mechanical reefers—the Santa Fe way. San Bernardino shop being equipped in anticipation of more widespread use of this type of car. 54

BRIEFS

Pennsylvania's new "piggyback" service for motor common carriers, originally slated to begin February 1, has been postponed two to three weeks while final details are worked out and terminal facilities at Chicago and New York are completed.

"Trainships" which can pick up and discharge loaded freight cars at any dock, by means of a crane on the ship, are in prospect for both east-Gulf and west coasts, respectively, by experienced operators. Newtex Steamship Corporation is planning services between Philadelphia, Baltimore and Houston, with sights on first sailing within 18 months. Coastwise Steamship Corporation is looking toward a California-Alaska run within perhaps a year.

Ohio's belt conveyor scheme got an early start when the state's general assembly convened in Columbus. Two bills (Senate No. 1 and House No. 6) are in committee and hearings on the latter are now definitely set to begin February 15. It appears that, unlike 1949 and 1952, the bulk of the 1955 arguments will be aired before the house committee or the house itself.

Build your own trailers for piggyback!—That's a new concept the Burlington is now exploring at its Havelock shops, where a 24-ft aluminum unit is being assembled in a pilot project. If the whole idea proves practical, the Burlington may build, rather than buy, most of its future trailer equipment, President H. C. Murphy has revealed.

"We can depend on our D7 starting in cold weather"



THE temperature dips mighty low in Houlton, Maine, where Donald J. McKay is doing a cold job for the Bangor and Aroostook railroad. From November to May, he contracts to remove ice from refrigerator cars. A CAT* D7 Tractor, equipped with a No. 75 Bulldozer, keeps the track clear of ice.

Mr. McKay, who unloaded 6900 cars last winter, reports: "We can *depend* on our D7 starting in cold weather. There is no doubt about it, it's the most economical tractor I ever owned. And our operators like this machine."

Sure starting in cold weather is another reason that Caterpillar-built equipment has an impressive availability record. An independent two-cylinder gasoline starting engine cranks the diesel, conditioning the engine before any load is placed on it. It circulates the lubricating oil, warms the water, intake air and precombustion chambers.

Result: your tractor is ready to go when your men are, no matter how low the mercury. And you reduce engine wear because the diesel is not brought to running speed while still cold.

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Cabinet Report "Under Study"

Commerce Secretary Weeks unable to reveal transport recommendations in talk at TAA 20th anniversary meeting—"Tough problems won't be ducked," he promises

A few fleeting glimpses of what future federal policy toward transportation might be was all Secretary of Commerce Sinclair Weeks was able to reveal to members and guests of the Transportation Association of America, when that organization marked its 20th anniversary with a luncheon and transportation panel discussion in Chicago on February 2.

Mr. Weeks, guest luncheon speaker, was scheduled to discuss the report of President Eisenhower's Cabinet Committee on Transport Policy and Organization, and the subject was to have been pursued further in the panel discussion, with various transport, ship-

ping and investment leaders joining him. Because the Administration has not yet arrived at final decisions on the report, however, Mr. Weeks said he was not at liberty to reveal what the committee's recommendations were.

A few of his remarks, though, did cast at least a glimmer of light on the character of the committee's undertaking. For example:

"You can be assured that the Administration does not intend to duck tough problems. To the best of our ability we are trying to develop solutions which will be helpful both to the (transportation) industries and to the nation as a whole.

"The health of railroads, shipping, trucking and airline companies affects far more than stockholders, workers and users. The American people directly and indirectly have a very tremendous stake in our entire transportation field and their interest is, of course, the paramount interest."

Boost—Mr. Weeks said the present Administration had added "something new to the transportation picture." He said: "We firmly believe in private enterprise. Therefore we firmly believe it is government's duty to lead so as to give private enterprise a boost and to clear away obstacles which may handicap private industry.

"I sincerely believe the report will point the way for the federal government to provide effective leadership through policies and programs designed to aid various forms of transportation in performing the jobs for which each is best suited." He added that the recommendations should pave the way for a system adequate for commerce, national defense "and in tune with our private competitive enterprise economy," and stated that the working members of the committee were "remarkably unanimous in their conclusions" in so far as the general transport picture is concerned.



TRIBUTE TO A PIONEER developer of the diesel locomotive—Richard M. Dilworth (right), former chief engineer of the Electro-Motive Division of General Motors Corporation—came in three forms a short time ago. Many top railroad officers gathered in Chicago to join educators and Mr. Dilworth's friends and former associates for a dinner in his honor. The dinner marked publication of his biography, "The Dilworth Story." Written by

Franklin Reek (reviewed on page 20 of this issue), and it also marked establishment of the R. M. Dilworth Fellowship for study of control of sound in diesel engines. Nelson C. Dezendorf (left), vice-president of GM and general manager of the Electro-Motive Division, is shown handing a check to John T. Rettaliata, president of the Illinois Institute of Technology, for establishment of the fellowship.

ICC's Clarke Sees No Need for "Deregulation"

Interstate Commerce Commissioner Owen Clarke has made it plain that he thinks the "new look" in transport regulation should come from the commission's changed attitude and not from legislation to bring about "deregulation."

The commissioner expressed this view in a January 25 address in Washington, D. C., before the class of American University's Seventh Institute of Industrial Transportation and Traffic Management. Presiding at the meeting was the institute's director—Edward F. Lacey, former executive secretary of the National Industrial Traffic League.

Rebuttal—Commissioner Clarke called part of his address "a rebuttal to the current clamor of deregulation." He said: "I am firmly convinced that there is nothing fundamentally wrong with our existing regulatory law. So long as it is wisely interpreted and applied in the light of present-day conditions, the Interstate Commerce Act will continue to fulfill its original functions and at the same time promote and preserve a strong common carrier industry."

Moreover, Mr. Clarke thinks the commission needs more power to deal

with the encroachment upon public transportation by unregulated carriers. "It is not the existing quantum of regulation over common carriers but rather the lack of jurisdiction over a large area of unregulated transportation that causes the real difficulties," Mr. Clarke said.

Rate Controls—As to rate-making freedom, Mr. Clarke said it was the commission's current policy "to exercise its power of suspension most sparingly." He went on to express his belief that "elimination of all controls over rate-making would be most disastrous."

Meanwhile, the commissioner noted, as he had before, that he recognizes "the need for Congressional action redefining the economic principles we should employ in regulating the rates of competitive forms of transportation."

Transport Group Stresses Five Points

In its efforts to assure a strong transportation system which can adequately serve the public, the Transportation Association of America this year will concentrate on five steps designed to strengthen the for-hire carrier segment of the system, Harold F. Hammond, TAA executive vice-president, said in New York January 25.

Mr. Hammond, addressing a luncheon of the New York Traffic Club, said the association's 1955 efforts will emphasize getting the government out of transportation; eliminating cut rates on government traffic; repeal of transportation excise taxes; easier abandonment of unprofitable rail lines and services; and speeding up the regulatory process so carriers can more readily meet changing conditions.

Supreme Court Denies EJ&E Liability Appeal

The United States Supreme Court has denied an appeal of the Elgin Joliet & Eastern to reverse lower court rulings which granted a total of \$40,000 in damages to three employees who suffered skin rashes through contact with diesel oil.

In its appeal to the Supreme Court, the road claimed that "this case is the forerunner of a group of cases in a wholly new field of liability." The suits were brought under the Federal Employers' Liability Act by three employees who contracted infections when the road switched from steam to diesel power and they were transferred to diesel maintenance jobs in 1947 and 1948.

The road argued that it had no prior knowledge of the oil's qualities that could have led to the dermatitis. The Illinois Court of Appeals reduced original jury awards totaling \$91,200 but refused to find that the road was not liable.

Railroads Need Section 22

AAR's Maloney says freedom section gives to compete for government traffic is only exemption from rate regulation that roads have

Until rate regulation of all transportation agencies is on an equal basis, the railroads need the freedom that the Interstate Commerce Act's section 22 gives them to compete for government traffic, according to William M. Maloney, general attorney of the Association of American Railroads.

Mr. Maloney made this statement on February 3 at New Orleans before the Southeastern Area Transportation Conference sponsored by the Chamber of Commerce of the United States. He was a member of a panel billed for a discussion of "whether the federal government's present authority to negotiate cut-rate transportation is fair to the general public." He called this "an unrealistic approach" in view of the present statutory and administrative scheme of regulation.

Lone Freedom Area—"Only in the making of rates for government traffic under section 22," Mr. Maloney continued, "do the railroads enjoy the same rights, privileges, and exemptions as do their competitors. Repeal of section 22 without other material changes in the scheme of regulation would deprive the railroads of their one area of complete competitive equality in rate making. If the railroads could no longer quote rates under section 22, they would instantly be subject to the same disadvantages in their competitive rate making for government traffic as they are now subject to in their competitive rate making for commercial traffic generally."

The AAR general attorney went on to say that in 1952 only 38% of the total highway transportation service (ton-miles) and 12% of the total tonnage of water traffic on the Mississippi river and its tributaries was subject to any rate regulation by the Interstate Commerce Commission. He also cited an ICC statement that exemptions "make effective regulation of water transportation impossible."

Mr. Maloney proceeded to observe that he hears "no contention that such vast exemptions as these impose unjust burdens on the shipping public." As he sees it, section 22 "is merely an exemption of certain traffic from rate regulation."

Neither "national" nor "policy" is what Mr. Maloney called the IC Act's declaration which is labeled "National Transportation Policy." He added:

"It is not 'national' because the act implementing it does not apply to all carriage, nor even to all for-hire carriage . . . It is not truly 'policy' for the act belies the statement of 'fair and impartial regulation.' For instance we find rail rates condemned as 'lower

than necessary' to meet competition, while section 305(c) provides that a water rate lower than a rail rate shall not be deemed to constitute an unfair or destructive competitive practice within the meaning of any provision of the act."

Public Relations

After Freedom—What?, Asks Warren Brown

"To make 1955 a railroad year of decision, it first becomes necessary to convert the traditionalists of the industry—the diehards who have mellowed under the convenience of being able to say 'they won't let us do it any other way,'" Warren Brown, president of the Monon, said in Chicago recently.

"Regulatory authorities are not completely to blame for the declining competitive power of the railway industry," he told members of the Railway Business Woman's Association of Chicago. "The Interstate Commerce Commission is not responsible for the public's general lack of knowledge of the plight of the railroads. The responsibility for putting that story across in rapid and frequent messages, written in easily understood, imaginative terms, does not rest with any other regulatory group," he declared.

Mr. Brown said he was "impressed very much" by what he presently knew of the report of President Eisenhower's Cabinet Committee on Transportation. In it he sees the possibility of new freedoms, which, from the standpoint of one in the railroad industry, seem to be in the best interests of public transportation. But if the report ultimately is not so considered, "then it becomes incumbent upon the railroad industry to present some counter recommendations during 1955."

In preparing the nation's transport decisions, he feels, "we should all heed the sensible advice of the president of the Illinois Central (*Railway Age*, December 27, 1954, page 9), who spoke out against subsidy for the railroad industry and warned of the dangers of accepting it. "If the American railway industry accepts subsidy from governmental groups, regulation would not constitute a partial economic liability. The industry could conceivably grow sleek and fat under present restrictions. However, in the bargain, you create a complete liability, for you hand the railroad industry to the American public as another group to

support. Let us by all means avoid anything which would make the prisoner fall completely in love with his chains," Mr. Brown stated.

Move Fast—The railroad with the best chance to succeed under free enterprise is one which can move within 24 hours after regulation is lessened

to put in effect changes it has planned under alert management, he said. "Within days, rates will be published for local movements, stations will be closed, etc., as the railroad looks out and begins taking business away from other transportation instead of merely swapping freight cars around."

Safety

ICC Answers Safety-Lapse Charge

Replies to published reports about its attitude toward appointment of director and assistant directors of locomotive inspection

The Interstate Commerce Commission last week answered published reports which, as the commission put it, contained "inaccurate statements" concerning its attitude toward appointment of the director and assistant directors of locomotive inspection, and which alleged that it was "putting politics ahead of railroad safety."

The answer was embodied in a February 1 memorandum which Chairman Richard F. Mitchell sent to heads of commission offices and bureaus and

all field personnel. The memorandum dealt with reports published in "at least three nationally-circulated publications."

The Publications—It is understood that the reports appeared in *Labor*, organ of most of the railroad labor unions; *Trainmen News*, organ of the Brotherhood of Railroad Trainmen; and *Washington Merry-Go-Round*, newspaper column authored by Drew Pearson.

Also involved is the labor organizations' opposition to the commission's undertaking to have the Locomotive Inspection Act amended to clear the way for further reorganization of its staff. The commission has proposed amendments which would eliminate provisions calling for Presidential appointments of the director and assistant directors of locomotive inspection.

Further complications have resulted from President Eisenhower's failure to conform to a long-standing "gentlemen's agreement" which contemplated that the directorship would go alternately to members of the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen & Enginemen. Under that arrangement, it would now be the Firemen's "turn," but President Eisenhower's nominee for the directorship is an Engineer, John A. Hall. The nomination is pending before the Senate Committee on Interstate and Foreign Commerce.

Among the published reports was one which cited "official ICC records" as the basis for a statement that casualties from locomotive failures "shot up from 88 in 1953 to a record total of 265 in 1954." The commission's memorandum set out the comparative 1953 and 1954 figures in some detail and then had this to say:

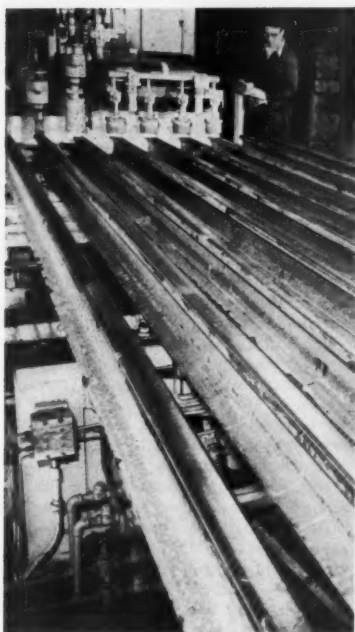
"The total number of accidents declined [1954 compared with 1953]. There was a marked increase [in 1954] in the number of persons injured, accounted for not by a 'doubling' of the number of accidents, but by a single accident in which 189 persons were injured. This accident involved the de-

railment of two locomotive units and 11 passenger cars because of a false flange on a slid-flat driving wheel resulting from a seized traction motor pinion bearing on a diesel-electric locomotive unit.

"An accident in which so many persons are injured is, of course, tragic and deplorable. It is completely inaccurate, however, to cite it as evidence that our inspection work has failed, or that the quality of that work has deteriorated. The decline in the number of accidents contradicts such an allegation."

Commendation — Chairman Mitchell went on to "commend our locomotive and other field safety inspectors for maintaining high standards of performance in their public service." He also asked the staff to be "assured that the commission is well aware of the importance of its duties in the field of railroad safety," and that it has "no intention of 'playing politics' in this field or in any other."

The chairman also recalled that commission representatives have appeared before Congressional committees to recommend that the positions of director and assistant directors of locomotive inspection be placed under the civil service system. Mr. Mitchell went on to emphasize that, except for this recommendation, the commission is not advocating any change in civil service's present coverage of its staff. "The commission wants all ICC employees, without exception, to be placed or retained under the civil service system," the chairman added.



U. S. STEEL's Edgar Thomson works, Braddock, Pa., has completed the first phase of an improvement program by placing in operation a third new rail end-hardening facility. With the new unit (above), the rail mill will be able to end-harden one steel rail every 90 seconds, heat treating 18 39-ft rails at one time.

Operations

NW Board Repeats Plea For Transport Tax Repeal

Because they have "outlived their original purpose" to become "an undue burden on travel and transportation," federal excise taxes on transportation should be repealed, the Northwest Shippers Advisory Board has stated. Repeating a resolution which it passed several meetings ago, the board, meeting at St. Paul January 27-28, again went unanimously on record as opposing the taxes, and arranged to notify all members of Congress and state legislatures throughout board territory of its opinion.

Whence New Cars? — Shippers' boards have a new responsibility in view of the current tense situation around Formosa, said Wesley E. Keller, newly elected general chairman of the board and vice-president of the Truax-Traer Coal Company. He said the lightning-swift nature of modern atomic war makes it imperative that there be an adequate car supply for any emergency, and asked that the carriers consider renewing their former program of 10,000 new freight cars a month.

Losses of "DF" car bracing equip-

ment by one road totaled \$240 per car per trip, according to W. M. Christel, Soo Line superintendent of transportation and chairman of the Railroad Contact Committee of the board. He commented that "every freight receiver must maintain stringent check on unloading forces if specialty cars are to trace their intended shipping progress."

Lloyd J. Severson, vice-president, mineral developments, United States Steel Company, was guest luncheon speaker. The board will hold its next meeting at Minot, N.D.

Mr. Keller succeeds R. E. Dobbins, Minneapolis freight traffic consultant, as general chairman. F. L. O'Neill, general traffic manager of the Minnesota Mining & Manufacturing Co., was named alternate general chairman; and L. A. Hart, traffic manager of the Cream of Wheat Corporation, general secretary.

Santa Fe Trucks Take Over

Trucks of the Santa Fe Transportation Company, a wholly owned subsidiary of the Santa Fe, have taken over pickup and delivery service for rail lcl shipments in the San Francisco area. The traffic had been handled previously by contract carriers.

More Piggyback

The Great Northern and the Chicago & North Western have inaugurated additional new piggyback operations.

Service for lcl shipments on a daily, overnight basis between Fargo, N.D., and Minot, via New Rockford, 233 miles, was started by the GN January 31.

On the same date the C&NW began handling lcl shipments between Fond du Lac, Wis., and Marshfield and intermediate points by highway, parallel to a 122-mi C&NW freight branch. At Fond du Lac (North Fond du Lac yard) this service ties in with existing t-o-f-c operations to and from Chicago on an overnight basis. Inauguration of trailer-load, truck-competitive rates in this territory is expected soon, the C&NW says.

Seatrail-Type Service To Alaska Is Approved

Car-ferry service between the United States and Alaska has been approved by Secretary of the Interior McKay. He has authorized two steamship companies to negotiate interchange agreements with the Alaska Railroad, with the possibility the service may be inaugurated six or 18 months from now.

The Alaska Steamship Company and Coastwise-Luckenbach Companies submitted satisfactory proposals for the service, which calls for discharge of loaded freight cars or truck-trailers at Alaskan railroad ports every five days. Coastwise-Luckenbach is converting two cargo ships which would be available for the ferry operation in

six months. Alaska Steamship reportedly is planning to build two ships for the service, and would have them ready in 18 months. They would each carry about 100 box cars or trailers.

Meanwhile, the Army Transportation Corps announced that a research firm has reported to it that the service is feasible.

The Army said that, in the interest

of the general transportation industry, it had William Wyer & Co. study the possibility of U.S.-Alaska ferry service. The report favored use of ships that would carry 128 freight cars or trailers each and sail at 18 knots. The Army emphasized that the survey dealt with commercial operation and that the Army has no intention of operating the service.

Equipment and Supplies



SYNCRSCAN, a new form of coded remote control which combines relay and electronic operation, has been announced by the General Railway Signal Company. The new ultra-high-speed signaling system (of which the

electronic scanner shown above is part), is said to permit centralized control of large, heavy-traffic territories, with multiple track and complex interlockings, without delays and with a minimum of equipment.

High-Speed Signal Control

The General Railway Signal Company has announced "Syncroscan," a new form of coded remote control combining relay and electronic operation, which is said to have outstanding characteristics of speed and capacity for both controls and indications. It makes possible centralized control of large, heavy-traffic territories of multiple track and complex interlockings—without delays and with a minimum of equipment.

The basic Syncroscan control system handles 64 stations with seven two-position (e.g., switch or signal) controls per station. With fewer stations, more controls per station are possible. Even this capacity may be substantially increased by addition of a relatively few relays and a carrier transmitter at the control office. A control cycle of 1½ seconds transmits complete control information for all functions at any field station.

The Syncroscan indication system is electronic, has no inherent limit on capacity, and transmits as many indications as required, at a basic rate of

100 per second. Operating by carrier, Syncroscan indication facilities are completely independent of the control system, so indications are transmitted simultaneously with controls. Moreover, indication does not involve shunting of the line at any time. By using carrier for controls as well as indication, it is possible to eliminate all requirements for physical line, and to operate the system, both control and indication, over lines already existing for other purposes.

Power requirements for electronic equipment at a field station are less than 100 watts, a reasonable load for emergency supply. If indication equipment fails at a field station, only indications for that station are lost. Controls for that station, and indications for other stations, continue to function.

Westinghouse Air Brake Has New Control Valve

A new air brake control valve for freight cars has been developed by the Air Brake division of the Westing-

house Air Brake Company. The new valve, designated type "AC," meets, like its predecessor "AB" valve, the basic air-brake specifications of the Association of American Railroads. If the valve receives favorable consideration from the AAR, it will be produced in limited quantities for testing in actual railroad performance. After such tests, if final AAR approval is given, the valve will be authorized as standard equipment.

The new valve, according to company officials, will operate in complete harmony with existing equipment, provides improved brake functioning, is lighter in weight, more simply designed, more economical to operate, and is less costly to maintain than the "AB" model, which has been standard equipment on freight cars for many years. Major parts of the new valve are aluminum, about 40% lighter than comparable parts of the "AB" brake equipment.

Rubber Diaphragm—To control the flow of air to the brake system, the "AC" valve uses a synthetic rubber diaphragm instead of the conventional piston and ring arrangement, and substitutes rubber seal rings for metal slide valves. Both features are said to provide positive brake operation and are expected to permit longer intervals between cleanings.

One of the features of the new valve which will save train- and yard-operating time, the manufacturer says, is faster serial release of brakes. Brakes on cars at the rear of a freight train $1\frac{1}{2}$ miles long are said to begin to release only nine seconds after those at the head of the train. This fast release of brakes is said to be four to five times faster than in any existing pneumatic railway brake system. The company thinks there will be a wide market for the "AC" valve on new freight cars and that car owners might profitably elect to replace older "AB" valves as they require major overhauling.

FREIGHT CARS

The **Alaska** has ordered 100 70-ton hopper cars from the Greenville Steel Car Company.

The **General Services Administration** and the **Foreign Operations Administration** announced last week that 3,300 freight cars costing \$12,906,844 have been ordered from U.S. builders for the Indian railway system. ACF Industries will build 1,650 "covered wagon" box cars with a gage of 3 ft, $3\frac{3}{4}$ in., and the Magor Car Corporation will construct 1,650 gondola cars with a $5\frac{1}{2}$ -ft gage.

The **Missouri Pacific** has been authorized by the St. Louis Federal District court to spend \$4,758,050 for 500 box cars, 150 special "D-F" box cars and 50 flat cars, all of which will be built at the road's De Soto, Mo., shops (*Railway Age*, January 24, page 12).

The **Southern** has ordered 1,150

50-ton box cars from the Pullman-Standard Car Manufacturing Company at an approximate cost of \$10,000,000. All the cars will have nailable steel flooring, and 200 also will be equipped with roller bearings and cushion-underframes. Deliveries are expected to begin in the second quarter of 1955. The road's inquiry for 1,000 box cars was reported in *Railway Age*, January 3, page 9.

PASSENGER CARS

How New Haven Would Use "Improved Talgos"

The New Haven is likely to have "half a dozen" new high-speed, low-center-of-gravity passenger trains in operation between New York and Boston by mid-1956; they "will be well worth the capital involved," John E. Slater, chairman of the road's board of directors, recently told the Downtown Luncheon Group of the Harvard Business School Club of New York.

Two "Musts"—The New Haven's main-line passenger traffic has shown. Mr. Slater said, great "vitality" in the face of air and highway competition, but the company "can't rest where it is." It "must have," he explained, a New York suburban station similar to its new all-train stop at Route 128, just south of Boston; and it must shorten travel time sufficiently to permit one-day round trips between the two cities, while allowing reasonable time for transaction of business between the two one-way journeys.

Trains of what he called an "improved Talgo" type, would accomplish the latter objective. Mr. Slater believes, by cutting down New York-Boston running time from four hours or more to three hours or three hours fifteen minutes, thus shortening overall travel time from the center of one city to the center of the other by approximately one hour. This, he explained, would reduce, between city centers, the present time differential in favor of air travel, "where further appreciable time reduction is not likely"; and would retain, even after completion of contemplated new and faster express highways, the railroad's present time advantage over auto travel.

To support his claim as to the "vitality" of New Haven passenger business, Mr. Slater pointed out that the railroad has increased its New York-Boston traffic to the point where it is currently carrying about 130,000 people monthly between the two cities. He compared this with an estimated 110,000 by air and 250,000 by auto, with buses "not too important."

MARINE

The **Pennsylvania** has ordered two diesel-electric tugboats from the Bethlehem Steel Company for delivery early next year. Each vessel, for service in New York harbor, will be 105 ft long

with a 26-ft beam and a 12-ft draft. The boats, to replace steam tugs, will increase to 13 the road's New York harbor fleet of diesel and diesel-electric tugs.

IRON & STEEL

The **New York Central** has ordered 10,000 tons of 127-lb rail as follows: Bethlehem Steel Company, 6,500 tons; U. S. Steel Corporation, 3,000 tons; and Inland Steel Company, 500 tons.

People in the News

Hutchinson Takes Oath As Member of ICC

Everett Hutchinson took his oath of office as a member of the Interstate Commerce Commission on February 1.

The oath was administered by Judge Eugene Worley of the United States Court of Customs and Patent Appeals at a special session of the commission. Proceedings of the session also included the official welcoming of Mr. Hutchinson and the bidding of an official adieu to his predecessor, former Commissioner Charles D. Mahaffie.

General Counsel E. M. Reidy spoke for the commission, while James F. Pinkney, president of the Association of Interstate Commerce Commission Practitioners, spoke for that association. Commission Chairman Richard F. Mitchell presided at the session. Secretary George Laird presented Mr. Mahaffie with a scroll signed by all members of the commission. Mr. Mahaffie spoke briefly, principally to pay tribute to members of the commission's staff, which he called a "remarkably



LESTER N. SELIG, who has been elected president of the American Railway Car Institute (*Railway Age*, January 10). Mr. Selig is chairman of the board of General American Transportation Corporation.

able, industrious and devoted group of people."

Mr. Hutchinson was appointed for the remainder of Mr. Mahaffie's term, which expires December 31, 1958. Mr. Mahaffie became 70 years of age December 5, 1954, and retired December 31 under provisions of the civil service law (*Railway Age*, January 24, page 11).

He has since received from President Eisenhower a letter extending the President's "personal word of thanks and appreciation for your many years



Everett Hutchinson

of devotion to duty." The nation, the President also said, "owes a debt of gratitude to you for all that you have done in the public interest."

Mr. Hutchinson is a Texas Democrat, and the many Texans on hand to see him take his oath included Senator Daniel and several members of the state's delegation in the House. His appointment was confirmed by the Senate on January 27, the same day on which the reappointment of Commissioner Kenneth H. Tuggle was also approved (*Railway Age*, January 31, page 9).

Education

FRP Announces Third Fellowship Program

The Federation for Railway Progress has announced its third Annual Fellowship Program, designed to give railroad employees an opportunity to study modern business and industrial methods at accredited universities. Fellowships of \$1,000 will be awarded to a selected employee of a Class I railroad in each major rail district: Eastern, western and southern.

To be eligible, an employee must be under 35 years old and have had two years experience with a railroad. Candidates must have the endorsement of their president or chief executive officer, and the railroad must agree

to pay a successful candidate at least a nominal salary while the winner is in school.

Figures of the Week

Freight Car Loadings

Loadings of revenue freight in the week ended January 29 totaled 641,979 cars, the Association of American Railroads announced on February 3. This was an increase of 6,326 cars, or 1.0%, compared with the previous week; an increase of 13,786 cars, or 2.2%, compared with the corresponding week last year; and a decrease of 55,463 cars, or 8.0%, compared with the equivalent 1953 week.

Loadings of revenue freight for the week ended January 22 totaled 635,653 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, January 22			
District	1955	1954	1953
Eastern	113,450	111,848	125,139
Allegheny	118,920	119,936	145,553
Pocahontas	49,843	47,474	51,870
Southern	119,307	117,785	128,590
Northwestern	74,093	65,622	77,816
Central Western	107,698	102,645	110,055
Southwestern	52,342	51,902	58,492
Total Western Districts	234,133	220,169	245,363
Total All Roads	635,653	617,213	697,515
Commodities:			
Grain and grain products	47,678	43,047	45,182
Livestock	8,509	7,474	8,040
Coal	124,770	125,696	127,387
Coke	10,373	9,774	15,685
Forest products	40,053	36,003	43,088
Ore	14,162	15,992	20,364
Merchandise I.c.l.	60,035	60,458	67,379
Miscellaneous	330,073	319,169	370,390
January 22	635,653	617,213	697,515
January 15	644,940	619,871	705,017
January 8	602,203	624,229	688,110

Cumulative total, 3 weeks 1,882,796 1,861,313 2,090,642

In Canada.—Carloadings for the seven-day period ended January 14 totaled 70,009 cars, compared with 58,759 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
January 14, 1955	70,009	29,088
January 14, 1954	66,521	26,575
Cumulative Totals:		
January 14, 1955	128,768	55,176
January 14, 1954	117,602	48,337

Rates & Fares

New England RRs Charge For Checked Baggage

A service charge for handling checked baggage was instituted February 1 by the Boston & Maine, the Boston & Albany, the Maine Central and the New Haven. In general, R. F. Cowan,

B&M passenger traffic manager, said, the charge at all stations is 25 cents for hand baggage and 50 cents for larger items, including trunks. Except for this fee, the railroads will continue to transport 150 lb of baggage for each passenger without additional collection.

Financial

Mexico to Use More of Its Export-Import Bank Credit

The Export-Import Bank of Washington has released for disbursement to Nacional Financiera, S.A., of Mexico, for rehabilitation of the National of Mexico, a further \$20,000,000 under a credit of \$51,000,000 authorized in 1951. After the disbursement just announced, only \$7,600,000 of the authorized total will remain to be disbursed. Decision to release the \$20,000,000 was taken after a favorable report on the railroad by representatives of the bank who made an inspection tour in November and December.

NYC and Rock Island Join IT Purchase Group

Hearings began at Washington last week on the proposed purchase of the Illinois Terminal by a group of railroads which have formed the Illinois-Missouri Terminal Company. The nine originators of the plan have been joined by the New York Central and the Rock Island. Opposing the proposal is the Toledo, Peoria & Western which still seeks to purchase the IT independently although an earlier bid was rejected (*Railway Age*, December 27, 1954, page 15). Entry of the Central and the Rock Island into the purchase groups is not opposed by the other nine roads which are: Baltimore & Ohio, Chicago & Eastern Illinois, Burlington, Wabash, Gulf, Mobile & Ohio, Illinois Central, Litchfield & Madison, Frisco and Nickel Plate.

Pinsly Would Buy Bankrupt NYO&W

Under terms of a reorganization plan filed with the Interstate Commerce Commission, S. M. Pinsly Associates, Inc., would purchase the bankrupt New York, Ontario & Western for \$4,600,000.

The purchase would also include the Ontario, Carbondale & Scranton, Ellenville & Kingston, the Port Jervis, Monticello & Summitville and other properties of the NYO&W.

General creditors and stockholders in the road would get nothing from the proceeds of the sale. Preferred credit- (Continued on page 15)

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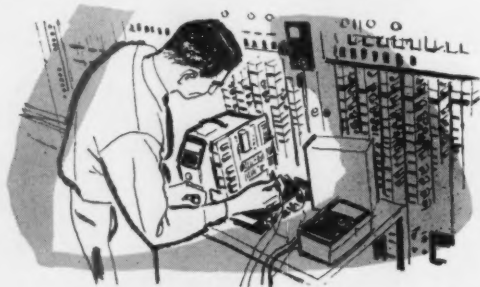
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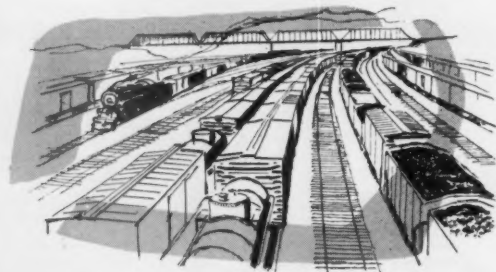
NEWEST EQUIPMENT—New developments in communications are available without investment of railroad capital. This keeps service at peak efficiency.



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BELL TELEPHONE SYSTEM

TELEPHONE MOBILE RADIO TELETYPEWRITER INTERCOMMUNICATION PAGING SYSTEMS TELEMETERING AND REMOTE CONTROL

Financial

(Continued from page 12)

ors, refunding mortgage bondholders and general mortgage bondholders would be paid in that order. Trustee for the road, Lewis D. Freeman, listed these debts among those outstanding: unpaid taxes, \$64,458, liabilities to New York State for grade-crossing eliminations, \$137,954.

Mr. Pinsly, operator of small roads in New England and New York State, recently purchased a part of the Boston & Maine line in New Hampshire to operate as the Claremont & Concord (*Railway Age*, August 16, page 10).

Alleghany Corporation. — *Intervention Denied.* — The ICC has denied the petition of Bolton Sullivan and Stewart Huston, described as independent directors of the Missouri Pacific, to intervene in the merger application (involving New York Central subsidiaries) under which Alleghany Corporation seeks to maintain its carrier status (*Railway Age*, September 27, 1954, page 52). The petitioners asserted that Alleghany would dominate MoPac when that road's organization becomes final. The ICC stated, however, that Alleghany is committed to deposit its MoPac stock in a voting trust.

Louisville & Nashville. — *NC&StL Merger.* — The L&N and the Nashville, Chattanooga & St. Louis have filed a joint application with the ICC for authority to effect a merger (*Railway Age*, November 29, page 12). The L&N would issue 384,000 shares of \$50 par capital stock to be delivered to holders of NC&StL's 256,000 shares of stock in the ratio of one and one-half shares of L&N for one share of NC&StL stock. All the latter shares would be cancelled. The application stated that L&N owns 191,747 shares of NC&StL stock and will, in the exchange, receive 287,620½ shares of the new issue at a total value of \$14,381,025.

The roads said in the application that they will achieve better operating efficiency with no cuts in service. Savings of up to \$4 million a year after five years through coordination of train, terminal and repair shop operations and clerical rate and sales forces as well as reduction of supervisory personnel, were predicted. The Atlantic Coast Line, as controller of the L&N through stock ownership, was also a party to the application.

New York Central. — *Control of B&A.* — The ICC has approved this road's application to issue certificates of deposit in connection with its plan to exchange NYC bonds for stock of the Boston & Albany, the Pittsfield & North Adams and the Ware River (*Railway Age*, December 27, 1954, page 14). The certificates, 261,278 in all, will evidence deposits of B&A stock with the NYC agent. The com-

mission stated that its approval of the certificates was not to be taken as approval of the whole plan, on which action was deferred.

Supply Trade

Alec Turner has been appointed executive vice-president of **International Equipment Company**, and its materials handling subsidiaries, **Industrial Equipment Company** and **Acme Materials Handling Company**. **J. N. MacInnes** and **H. W. Wreford**, formerly assistant vice-presidents, railroad sales, have been appointed vice-presidents. **B. G. MacFarlane** has been named general service manager and **E. C. Fraser** chief engineer.

Hubbard & Co. has completed a \$1½-million expansion and modernization program at its three principal plants, in Oakland, Cal., Chicago and Pittsburgh. The major part of the program has been concentrated in Oakland, where 40,000 sq ft of floor space have been added, including a new galvanizing plant and additional room for storage and assembly operations.

J. P. Jung, assistant regional manager of **Cummins Engine Company** at Los Angeles, has been appointed southeastern regional manager at Atlanta, Ga., succeeding **R. P. Parshall**, who has become president of **Cummins Diesel of Wisconsin, Inc.**, at Milwaukee.

James Laurie, formerly acting general manager of the Georgia & Florida, has become a member of **William Wyer & Co.**, consulting engineers, East Orange, N. J.

Paul D. Sullivan, in charge of contractor sales of Le Roi division, **Westinghouse Air Brake Company**, at New York, has been made assistant sales manager, at Milwaukee.

Johns-Manville, Industrial Products division, has enlarged its merchandising organization at San Francisco and has named **Arthur W. Knight** Pacific Coast merchandise manager. **Johan H. Peterson** will continue as Pacific coast staff manager for Johns-Manville Transite, asbestos-cement, pipe products. **Lawrence M. Osborn** has been promoted to Pacific coast staff manager for J-M industrial products (other than Transite pipe), and **H. C. Bruner** to Pacific coast staff engineer for the Industrial Products division.

Ben G. Bowman and **Dan S. Wooldridge** have formed the **Bowman Supply Company**, 593 Union Commerce building, Cleveland, to represent accounts formerly handled under the name of **Grandy Railway Equipment Company**.

Carborundum Company has established a new operating unit, **Electro Minerals Division**, to manufacture and sell silicon carbide and fused alumina crudes, abrasive grain and related electric furnace products. The division will be under management of **Joseph S. Imirie**, formerly assistant to president.

(Continued on page 56)



E. L. Woodward (left) is now Pacific Coast editor (mechanical) of *Railway Age*, at Los Angeles. **G. J. Weihs** (right) succeeds Mr. Woodward as western mechanical editor at Chicago. Mr. Woodward, a graduate of Massachusetts Institute of Technology (B.S. in E.E., 1911), started his railroad career on the Boston & Maine and worked on the New York Central before joining the Simmons-Boardman Publishing Corporation as associate editor of *Rail-*



way Mechanical Engineer (now *Railway Locomotives and Cars*). For two years (1917-1919) he was with the Railway Engineers Corps, U. S. Army, and since 1923 has been western mechanical editor at Chicago. Mr. Weihs, a graduate of Purdue University (B.S. in M.E., 1940) was with the Erie for three years and came to Simmons-Boardman in 1946 as associate editor of *Railway Mechanical Engineer* after three years' service in the U. S. Navy.

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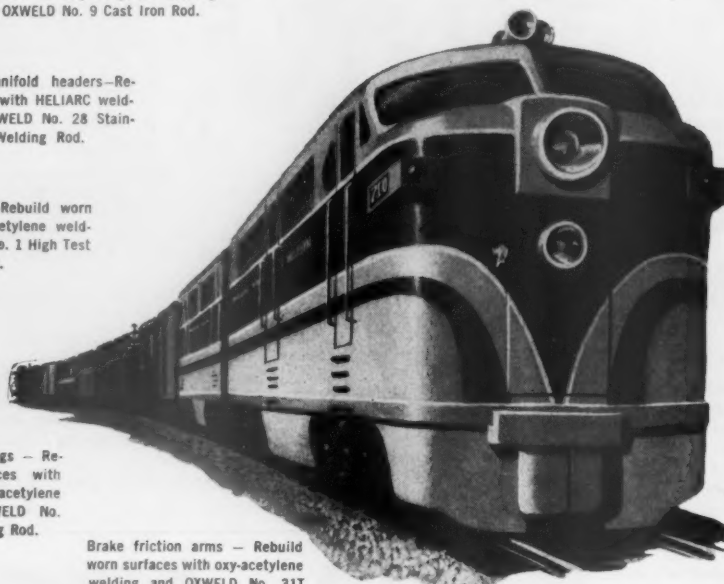
Aluminum pistons—Repair cracks and fill in ring grooves with HELIARC or sigma welding and OXWELD No. 23 Welding Rod or Wire.

Aluminum radiator parts—Repair cracks with HELIARC or sigma welding and OXWELD No. 23 Welding Rod or Wire.

Aluminum cooling blades — Repair breaks and cracks with HELIARC welding and OXWELD No. 23 Aluminum Welding Rod.

Exhaust manifold headers—Repair cracks with HELIARC welding and OXWELD No. 1 High Test Steel Welding Rod.

Truck equalizers—Rebuild worn areas with oxy-acetylene welding and OXWELD No. 1 High Test Steel Welding Rod.



Axle thrust bearings — Renew worn surfaces with HELIARC or oxy-acetylene welding and OXWELD No. 31T Bronze Welding Rod.

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Compressor clutch sleeves — Renew worn teeth with oxy-acetylene welding and OXWELD No. 31T Bronze Welding Rod.

Brush holders—Build up worn surfaces with oxy-acetylene welding and OXWELD No. 27 Low-Temperature Bronze Welding Rod.

Intake and exhaust valves — Build up worn faces with oxy-acetylene welding and HAYNES STELLITE Alloy No. 6 Rod.

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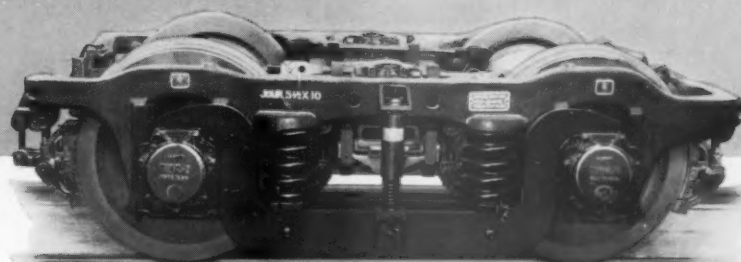
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WEALTH passenger car trucks. These include equalization, swing-motion and one-piece cast steel truck frame with pedestals cast integral to insure perfect alignment of wheels and axles.

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Crossbucks are only one of many reflectorized railroad signs that benefit from aluminum's unique com-

bination of advantages. For example, Kaiser Aluminum sheet is widely used for speed signs, yard limit signs, whistle signs, mile posts, station name signs, to name a few.

Let us show you how aluminum signs can substantially cut your costs. Contact the Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc., *General Sales Office*, Palmolive Bldg., Chicago 11, Illinois; *Executive Office*, Kaiser Bldg., Oakland 12, California.

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Kaiser Aluminum

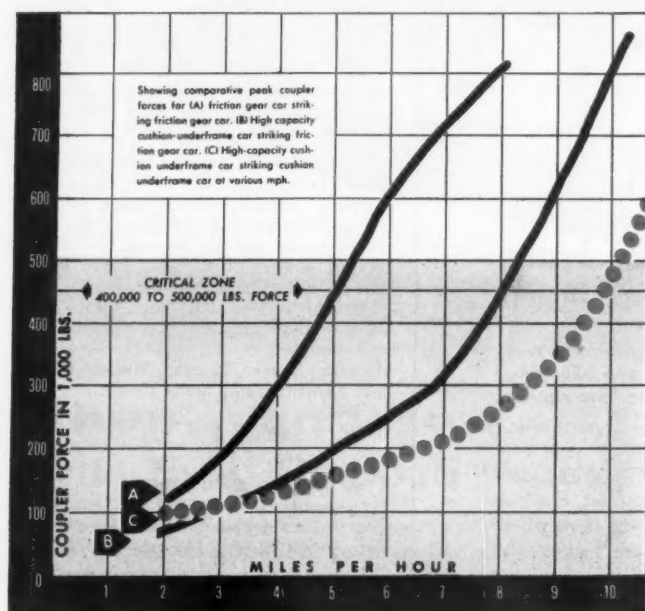
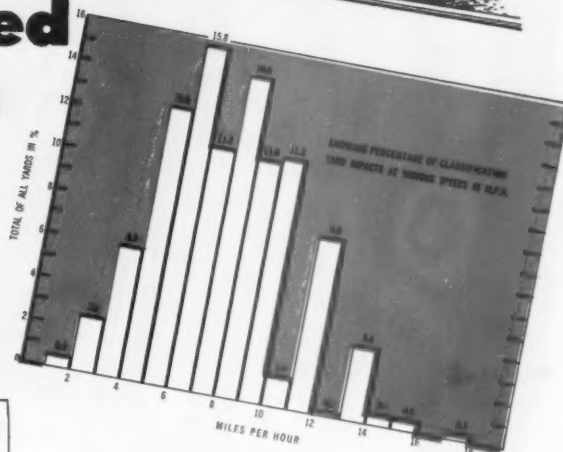
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Current Publications

BOOKS

THE DILWORTH STORY, by Franklin M. Reck. 102 pages. McGraw-Hill Book Company, 330 W. 42nd St., New York. \$3.

Railroad men who have known and had dealings with Dick Dilworth over the past 20 or 25 years will have many a chuckle over this story. The author has missed no opportunity to portray him in all the color and saltiness of his personality.

Dilworth, the engineer who guided development of diesel-electric locomotives for road service into the direction of standardization for assembly-line production, was a self-educated man, with but one-half day of formal education in his whole life. How a boomer machinist acquired the knowledge required by the chief engineer of Electro-Motive Division of General Motors Corporation is illustrated by an incident which occurred on his first job as a machinist. Hired on his own optimistic appraisal of his attainments, he discovered that he would have to know trigonometry to use a machin-

ist's handbook and that he would have to know arithmetic and algebra to understand trigonometry. He never studied anything for which he had no immediate use, but never hesitated to go back and start with the fundamentals on any problem with which he was confronted.

Mr. Reck gives a complete account of his accomplishments as an engineer and illustrates his forthright method of dealing with men at all levels with many incidents and anecdotes. But in setting forth Dilworth's accomplishments he had tended toward over-inclusiveness. As a review of a period of tremendous importance in the history of railway motive power the book is not complete. As the story of an unusual personality, whose part in one aspect of motive power development is known to many men in railway service today, the reader is not likely to be disappointed.



Over 1½ miles of KELLY tubes serve the freight terminal at Cicero.

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The Burlington uses

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KELLY SYSTEMS, INC.
Engineers and Manufacturers of Pneumatic Tube Systems

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THE FIRST THROUGH A CENTURY, 1853-1953; A HISTORY OF THE FIRST NATIONAL BANK OF SAINT PAUL, by Frank P. Donovan, Jr., and Cushing F. Wright. 144 pages, illustrations. Hason Press, Webb Publishing Company, 55 East Tenth St., St. Paul 2, Minn. \$4.

While this is primarily a history of the First National Bank of Saint Paul, *Railway Age* readers will find of interest the chapter on James J. Hill's connection with the bank, and the numerous railroad references which appear throughout the text.

GREAT RAILROAD STORIES OF THE WORLD, edited with notes by Samuel Moskowitz. 331 pages. McBride Company, 200 E. 37th St., New York 16. \$3.95.

A collection of stories of the golden age of railroading, full of drama and nostalgic interest. These tales, both fact and fiction, run the gamut of the age of steam and are by many of the greatest writers of our era. There are tales of humor and tragedy, of excitement and thrills, and stories with a more romantic modern flavor told by such authors as A. W. Somerville, Marquis James, Thomas Wolfe, William Saroyan and Lucius Beebe.

THE PUNCHED CARD ANNUAL, Vol. III. 235 pages. Edited by D. A. Talucci. Punched Card Publishing Company, 502 Maccabees bldg., Detroit 2, Mich. 235 pages. No price given.

Users of punched card equipment should find this volume of real value. It is full of "how we did it" articles on use of punched cards. Generally, they are signed by the designer of the system described.

There are two articles having a (Continued on page 28)



The famous *General* became a prize of war during the Civil War when she was captured at Big Shanty, Ga. However, after a hair-raising 90-mile chase, she was recaptured by two intrepid railroad men with the assistance of Confederates. She remained in special service well into the 1890's.



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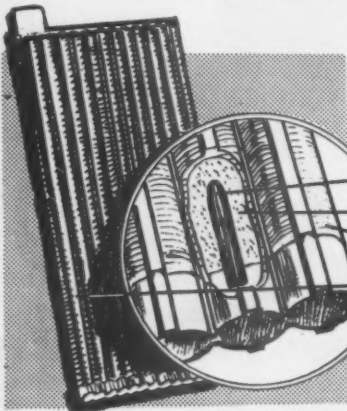
THEY SPIN 2000 H.P. DIESEL LOCOMOTIVE UNITS TO FIRING SPEED IN SECONDS. THE TREMENDOUS RESERVE POWER OF EXIDE IRONCLADS ASSURES NOT ONLY QUICK STARTING BUT ALSO THE POSITIVE OPERATION OF CONTROLS. IRONCLADS GIVE THE BEST BATTERY OPERATION WITH LOWEST COSTS BECAUSE OF EASY MAINTENANCE AND LONG SERVICE LIFE.

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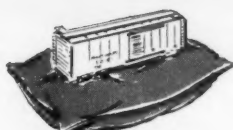
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CUSHIONED RIDE

Constant pressure of the friction wedges against the bolster develops friction resistance to control vertical and lateral shocks.



LESS POUNDING OF ROADBED

Because the National C-1 truck smothers vertical and lateral shocks there is less pounding on the roadbed.



LESS MAINTENANCE

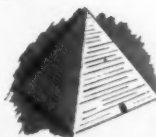
Maintenance costs are reduced because National C-1 trucks give a ride that prolongs the wear life of car, wheels, journals, bearings and roadbed.

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For low maintenance and satisfied shippers equip with National C-1 trucks.

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LONG WEARING PARTS

Friction wedges, low-stressed wedge springs and hardened spring-steel wear plates are designed to last the life of the car.



FULL-WIDTH BEARING

The convex surface of the friction wedge has full-width bearing against the side frame pocket—for minimum wear.



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Lid faces are jig-ground for smooth surface and for alignment of hinge lug and face; hinge lugs can be furnished with steel bushing and hardened steel wear plate for long life.

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Diesel engine house of the Seaboard Air Line Railroad shows how Corrugated Transite was used in combination with glass to provide an attractive, maintenance-free exterior.



Interior view showing type of construction used. The office (right foreground) is built with flat Transite sheets.

... with asbestos-cement **CORRUGATED TRANSITE***

FOR MODERN, ATTRACTIVE, low-maintenance diesel shops . . . the nation's leading railroads are building with time-tested Corrugated Transite.

This Johns-Manville asbestos-cement product is moulded under pressure into fireproof, rustproof, and rotproof sheets that never require paint or other preservative treatment . . . are virtually maintenance-free. Important, too, in structures housing diesel equipment, they will not absorb oil-laden exhaust fumes which might create a fire hazard.

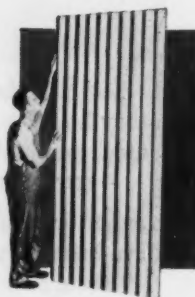
Construction is fast, too, because Corrugated Transite comes in large sheets (from 3 to 11 feet long, 42 inches wide) that cover large areas quickly. It is easy

to cut or drill . . . requires only a minimum of framework . . . and can be readily fastened to either steel or wood.

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Save money in the housing of *your* diesel equipment by building with Corrugated Transite. Write for further details to Johns-Manville, Box 290, New York 16, N. Y. In Canada: 565 Lake Shore Rd., Port Credit, Ont. Ask for Brochure TR-45-A.

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Manual slack adjustment costs money!

Have you ever figured out just how much you spend every year on manual brake adjustment? It can run into many thousands of dollars.

These costs can be pared to the bone with Westinghouse Type D Pneumatic Slack Adjusters.

It will pay you to investigate.

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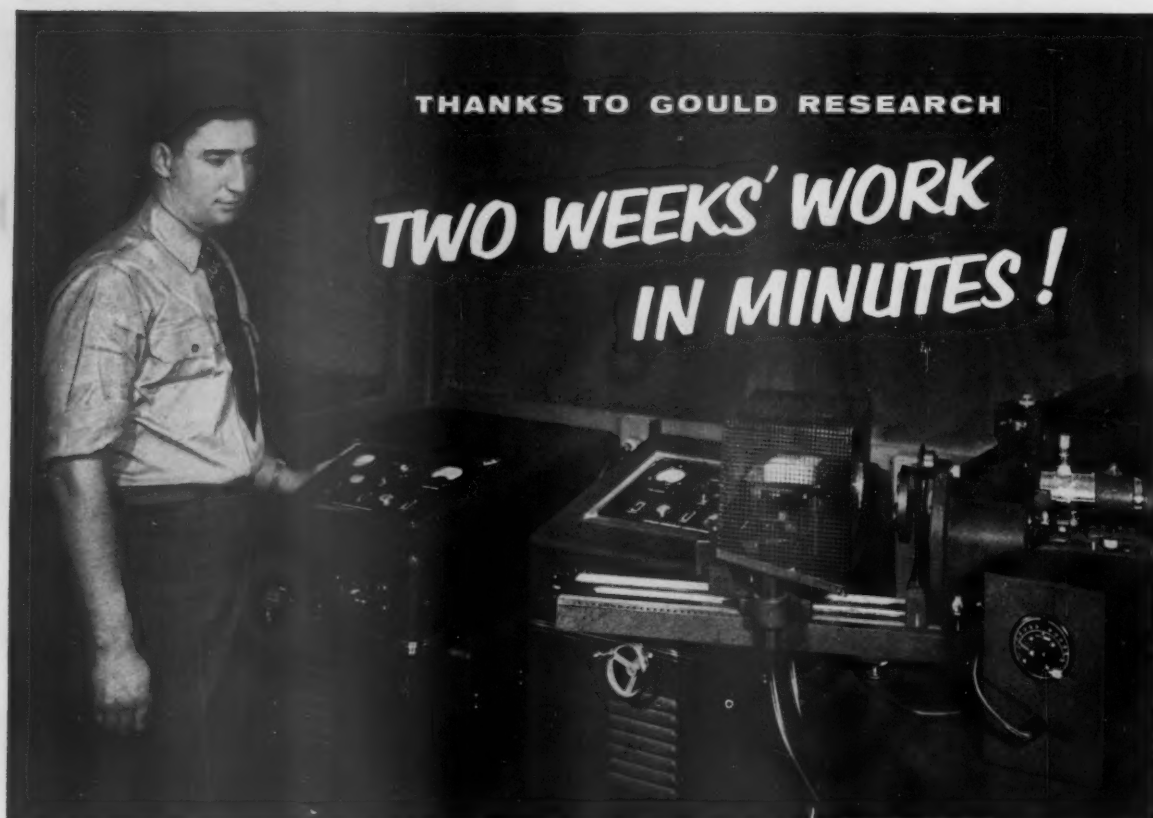
AIR BRAKE DIVISION



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NEW MOVIE AVAILABLE entitled, "AT THIS MOMENT"—showing a vivid story of modern railroad progress. Length 26 minutes, on 16 mm. color sound film. For use of film write: United World Films, Inc., 1445 Park Ave., New York or Association Films, Inc., 347 Madison Ave., New York.





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**TWO WEEKS' WORK
IN MINUTES!**

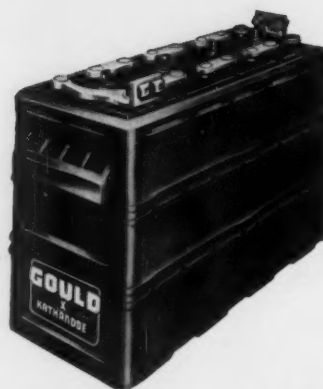
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By Hungerford



E Edgewater Steel Company

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Serving America's Railroads

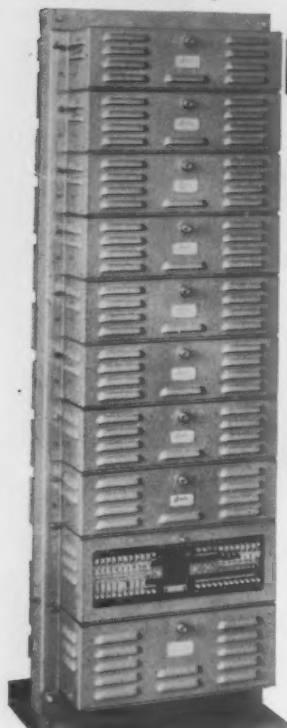
WITH ROLLED STEEL TIRES
ROLLED STEEL WHEELS
AND DRAFT GEARS

We will be glad to send you enlarged copies of this Hungerford cartoon (with our advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.



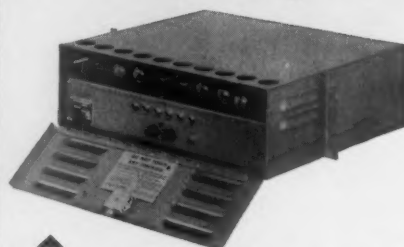
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How to add more telephone circuits economically — when existing lines are already overloaded!



THE SOLUTION:

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▲ Lynch B-37 Telephone Carrier is a completely self-contained terminal available in operating frequencies between 3.5 and 62 kcs. Five channels.

▲ Lynch B-60-J carrier is a 12 channel high frequency system operating in the 40 to 150 kcs. range. Stackable, drawer-type assembly provides compact, accessible design.

Like all the electrical items Graybar provides for the nation's railroads, Lynch carrier equipment is intelligently engineered, well built and thoroughly proved in field test conditions.

The Lynch B-60-J and B-37 telephone carriers shown here are typical of the complete line of modern communication equipment available via Graybar. These terminal assemblies offer you the very finest in multichannel performance. Both contain stackable, drawer-type channels—each a self-contained unit with its own power supply and signaling facilities for dial or ring down operation. Regulation for both terminals and repeaters is available where required.

Railroad Communication Engineers have long found it practical and profitable to call on Graybar for assistance in solving communication problems. Through a nationwide system of distribution via one hundred and twenty strategically-located offices and warehouses, we are in a position to serve you promptly and efficiently.

And Graybar service to railroads naturally includes the assistance of Graybar specialists in the fields of railroad communications, lighting, pole-line construction, power equipment and maintenance. When you have a problem their help can be invaluable. Check the "Pocket List" for the Graybar office nearest you. *Graybar Electric Company, Inc., Executive Offices: Graybar Building, 420 Lexington Avenue, New York 17, N. Y.*

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are distributed
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Current Publications

(Continued from page 20)

direct bearing on railroading. One describes the Santa Fe's car reporting and accounting system; the other, the C&O's use of punched card equipment in preparing operating cost control reports. But there are also articles concerning tabulating equipment procedures of truck lines, air lines, etc.

A potentially valuable feature of the book is the "Procedure Exchange Directory," which lists persons to whom one may write for information on specific types of procedures practiced in given types of industries.

PERIODICAL ARTICLE

THE CONFLICT OVER RAILROAD REGULATION IN ALABAMA, by James F. Doster. The *Business History Review*, December 1954, pp. 329-342. Graduate School of Business Administration, Harvard University, 217 Baker Library, Soldiers Field, Boston 63, Mass.

A half-century ago the conflict over state regulation of railroads was the chief issue in Alabama politics. Two staunch advocates led the rival forces. Both leaders were in agreement on the need to develop the industrial capacities of the state, but each sponsored violently opposing concepts of how this could best be done. This article is concerned with explaining the two opposing positions, as espoused by Milton H. Smith, president of the Louisville & Nashville, and Braxton Bragg Comer, a successful merchant and industrialist, whose persistent advocacy of railroad regulation led, in 1906, to his election as governor of the state.

ANNUALS

A YEAR BOOK OF JNR INFORMATION, 1954 Edition. 64 pages. Japanese National Railways, JNR Building Marunouchi, Tokyo, Japan.

RAILWAY STATISTICS, 1953. 23 pages. Japanese National Railways, JNR Building Marunouchi, Tokyo, Japan.

STATISTICS OF CLASS I MOTOR CARRIERS FOR THE YEAR ENDED DECEMBER 31, 1952. 89 pages. Prepared by Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Available from Government Printing Office, Washington 25, D.C. \$1.

PAMPHLET

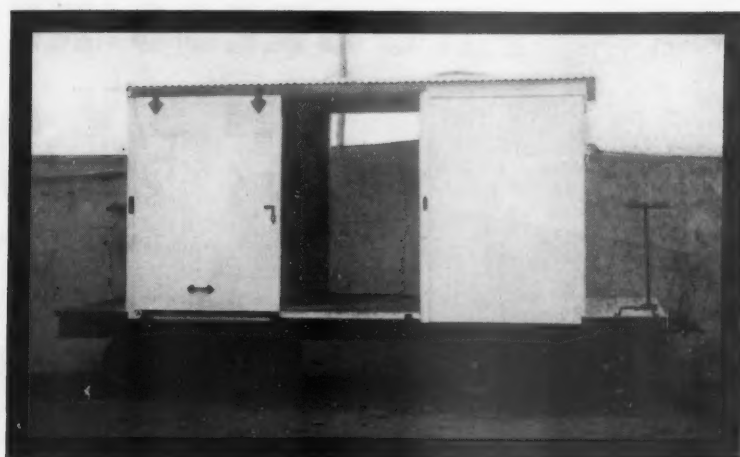
TOLLROADS, RAILROADS AND PIGGYBACK OPERATIONS. 10 pages. John Nuveen & Co., 40 Wall st., New York 5. Free.

A discussion for owners and prospective owners of bonds secured by toll road revenues as to the possible future effect of "piggybacking" on such revenues. That effect, the study concludes, will be negligible.

PICTURE OF PROGRESS

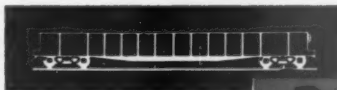
1905

1955



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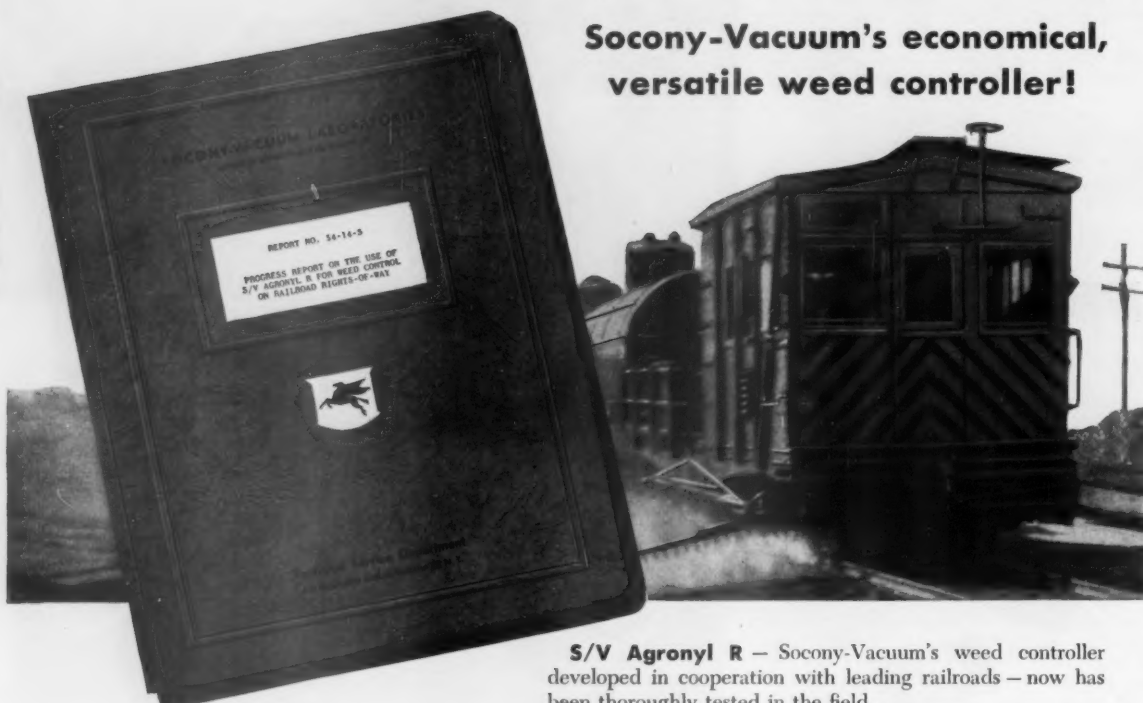
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versatile weed controller!**



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S/V Agronyl R — Socony-Vacuum's weed controller developed in cooperation with leading railroads — now has been thoroughly tested in the field.

Last year it was used by 14 railroads on rights-of-way as far apart as the Gulf of Mexico and the Canadian border. Thus, users had an opportunity to observe *S/V Agronyl R* under practically every kind of climate condition and on all typical roadbed vegetation in this wide area.

The results are now available in our Technical Service Laboratory Report No. 54-14-S . . . "Progress report on the use of *S/V Agronyl R* for weed control on railroad rights-of-way." This is the most complete summary of data ever compiled on the correct application of herbicidal oil to assure effective weed control.

Copies of Report No. 54-14-S are available to all railroad chief engineers and their staffs. Personal consultations regarding results covered by the report, and their application to your problems, will be arranged without obligation. Simply write us, or call your Socony-Vacuum representative.

TYPICAL RESULTS OBTAINED WITH S/V AGRONYL R



Four-week hold-down,
Alabama



Seven-week hold-down,
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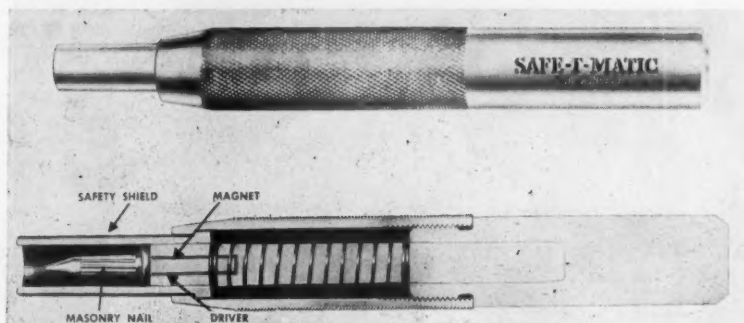


Nine-week hold-down,
So. Minnesota



Ten-week hold-down,
Oklahoma

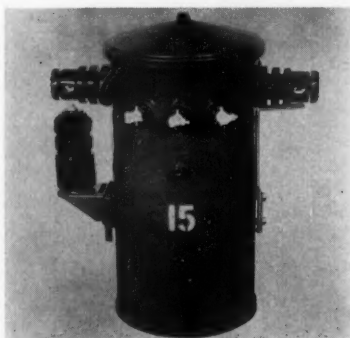
What's New in Products



Masonry Nail Driver

The "Safe-T-Matic Nail Driver," for driving masonry nails quickly and safely into concrete, cinder blocks, concrete blocks, and light and medium gage metals, features a built-in permanent magnet which holds the nail in correct position, and a sliding safety shield, which cut working time 80% and eliminate danger of flying nails.

Nails driven with the new driver have strong holding power and do not require use of star drills, plugs and screws. The tool takes masonry nails $\frac{1}{2}$ to $1\frac{1}{8}$ in. in length, and can be used for fastening clamps to cement or cinder block walls or cables, conduits, tubing, brackets, fixtures, bracing, cornices, gutters, leaders, etc. —Safety Nail Driver Corporation, Clifton, N.J.●



Distribution Transformers

This redesigned line of distribution transformers, said to be smaller, with larger ratings, improved sealing and fewer parts, is manufactured in single-phase ratings from 3 to 167 kva, 15,000 volts and below, and in 3-phase ratings from 9 to 150 kva, 15,000 volts and below.

By improved tanks and handhole covers, almost 40 external bolts, clamps and lugs have been eliminated in these cover-bushing transformers. The cover is secured by a single bolt threaded into an internal beam support. This bolt provides improved sealing by applying uniform pressure throughout the circumference of the corprene gasket.

New hanger and lifting lugs have straight sides welded directly into the tank wall. Step-core design permits winding the coil closer to the core, giving a shorter mean turn to the coil. Other improvements include new high and low-voltage bushings, lightning arresters and arrester-mounting brackets.

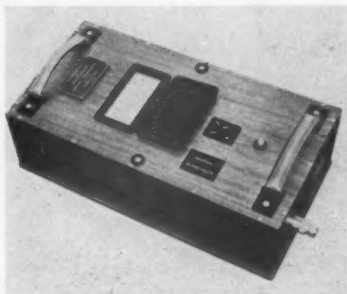
The larger ratings have been designed to meet E.E.I.-N.E.M.A. requirements. Height reductions range from 22.7 per cent for the 25-kva ratings to 13 per cent for the $37\frac{1}{2}$ and 50-kva ratings. Westinghouse Electric Corporation, P. O. Box 2099, Pittsburgh 30, Pa.●

Self-Sealing, Overhead Grain Doors

A new design of permanent grain door for box cars, built somewhat along the lines of a roller-type overhead garage door, operates on tracks which fit on either side of a standard six-foot door opening. The tracks are designed to form a seal around the door when it is lowered into service position. The doors are said to have a surface sufficiently smooth to permit their use with flour, sugar, cement and other sacked commodities as well.

When raised, the door will clear any object that can enter the doorway of

the car. It is claimed by the manufacturer that the installation is permanent and that the doors will last the lifetime of the car. H. R. Stine & Sons, Ltd., 114 East 13th st., Newton, Kan.●



Insulation Resistance Tester

This tester can be useful in preventive maintenance, particularly in testing circuit breaker bushings, and in making time-resistance or dielectric-absorption checks on apparatus which has relatively high 10 minute insulation resistance values.

The device, a rectifier-operated "Megger," can be used where a number of tests are to be made in one location, as in testing separate conductors or cables, where high resistance values are indicated continuously and as a convenient source of direct current at a relatively high voltage.

There are two models available, one having a range up to 100,000 megohms at 5,000 volts and the other having a range up to 200,000 megohms at 10,000 volts.

Moving systems of the units are equipped with vibrators to reduce pivot to jewel friction so that high sensitivity can be achieved. James G. Biddle Company, 1316 Arch st., Philadelphia 7.●

Electric Hoist

The Series 600 Load Lifter hoists are available with lug, upper hook, and trolley suspensions in capacities of 1,000 and 2,000 lb. These push-button controlled units of the wire rope and drum type were developed for production lifting. Construction features include frames of aluminum alloy, alloy steel heat-treated gearing with machine-shaved teeth, double brakes, magnetic control with only 24 volts at push buttons, interchangeable suspension and positive upper stop to prevent overtravel of hoist hook. Shaw-Box Crane & Hoist Division, Manning, Maxwell & Moore, Inc., Muskegon, Mich.●



Heavy fluids can't hinder working parts in these CRANE VALVES

THIS CASE HISTORY tells how the United States Playing Card Co., Cincinnati, solved—with Crane Diaphragm Valves—a costly problem of piping heavy enamels for paper coating.

The trouble was in the plug cocks and conventional gate valves formerly used in the enamel lines. During normal shutdowns the heavy liquid would build up on seating surfaces, in stem threads and working parts. The cocks and gates would "freeze up" . . . were hard to operate . . . couldn't be shut tight. The condition hampered production . . . made floors messy and dangerous . . . pushed maintenance costs sky-high.

Replacing with Crane Packless Diaphragm Valves stopped the trouble completely. Their sealed-to-fluid bonnet and pliable neoprene disc insert did the trick. After more than 4 years, all 48 Crane valves installed—with no maintenance whatsoever—are still seating tight . . . still operating freely and smoothly.

CRANE PACKLESS DIAPHRAGM VALVES

Working parts are safely out of contact with line fluid. The diaphragm seals the bonnet—that's all it does, giving it longer life. The independent disc with pliable insert seats tightly on foreign particles or seat deposits . . . and controls fluid, even should diaphragm fail. See your Crane Catalog or Crane Representative for wide selection of body, bonnet, and trim materials in these valves for countless uses.



CRANE CO.

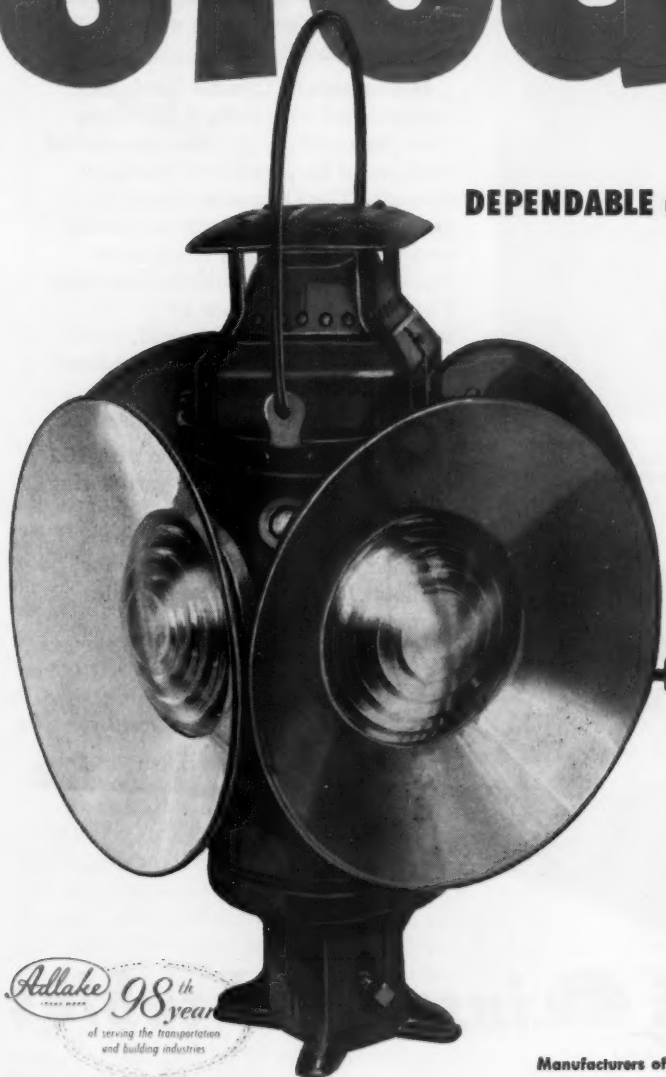
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Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • KITCHENS • PLUMBING • HEATING

CRANE'S FIRST CENTURY . . . 1855-1955

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DEPENDABLE UNDER ALL OPERATING CONDITIONS!



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ADLAKE Oil Switch Lamps can be counted on under every operating condition. ADLAKE "balanced draft" ventilation has proved its merits by use in the most difficult installations for many years, and in many parts of the world...and it will assure you, too, of trouble-free performance.

Write for complete information on dependable, money-saving ADLAKE Lamps and Lanterns today. Address 1150 N. Michigan, Elkhart, Indiana.

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Adlake 98th
year
of serving the transportation
and building industries



harnesses diesels with **OKONITE-OKOPRENE** type DEL wiring



Mounting Okonite-Okoprene diesel wire in this wire harness sub-assembly saves labor for the Atlantic Coast Line. It eliminates the need for pulling individual wires through the diesel engine conduit system.

The Atlantic Coast Line Railroad, in keeping with its modernization program, selected a service-proved cable—Okonite-Okoprene type DEL—to harness its diesel locomotives. Service experience has proved that heat, moisture, mechanical abuse and oil—the main causes of damage to diesel circuits—have little or no effect on this cable's composite wall insulation and sheath.

Heat-resistant Okonite insulation, compounded with natural Up-River Fine Para rubber, provides time-tested mechanical toughness and electrical strength. The Okoprene sheath, a neoprene compound made to Okonite's own formula, is highly resistant to diesel lubricants and mechanical wear. Firmly bonded together by vulcanization in a metal mold, Okonite-Okoprene is the longest-lived diesel electric locomotive wire.

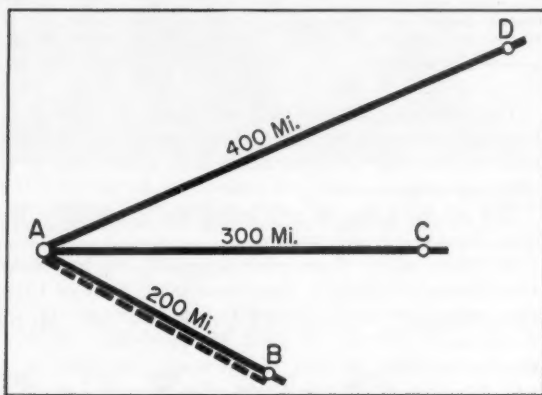
In addition to diesel wiring, Okonite-Okoprene is used on over 100 other Class 1 railroads for yard wiring, signal circuits and car wire. For complete information on Okonite railroad wires and cables, write for Bulletin RA-1078 to The Okonite Company, Passaic, New Jersey.



OKONITE OKONITE SINCE 1878 **insulated cables**

2398

Who Has Got the Answer to This Problem?



A Problem of Competitive Rates and Traditional Differentials

Many railroad men outside the traffic departments apparently believe that freight rates are none of their business—but are the sole concern of top traffic officers. For many years, and until comparatively recently, such an opinion would have been right. It is doubtful whether it is now. Because the rate situation has lately turned up some problems so complex and baffling, and so highly important, that all the thinking the railroads can muster, regardless of department, is needed to deal with them.

Take, for instance, the very widespread problem that confronts the railroads of trying to meet competition while, at the same time, not destroying the traditional "market relationships" of producers located at different distances from important markets. Consider this hypothetical case—

Let's call the commodity "gussets"—a basic product of a wide variety of uses. One of the important markets for gussets is located at A, and big plants producing gussets are at B, C, and D—each on a different railroad and, respectively, 200 miles, 300 miles and 400 miles from A. Practically ever since these producing plants have been in operation, there has been a freight rate differential of 3c per 100 lb, favoring B under C, and of 6c in favor of B, as compared with D.

The gussets all bring the same delivered price at A. Since the transportation differentials are of long standing, the trade has grown used to them. Quite likely, actual production costs at C and D may be somewhat lower than at B, enabling these two plants to absorb slightly higher transportation costs. If the rate from B to A is 30c per 100 lb, then the railroad hauling the gussets between those points is getting earnings of 3c per ton-mile; the railroad from C to A is getting 2.2c per ton-mile; and the D to A railroad 1.8c per ton-mile. There is a satisfactory profit margin in the business (which loads heavily) for all three railroads.

At this point, unregulated competition (shown by the dotted line on the chart) enters the picture between B and A. To keep the gussets on its rails, the railroad from B to A finds that it must reduce its rate to 20c per 100 lb. A careful check of costs convinces this railroad that, even with this lower rate, the traffic will still yield some profit. If this reduction is made and the traditional differentials of 3c and 6c, B under C and D respectively, are maintained, then ton-mile earnings of the B to A railroad will be 2c, of that from C to A 1.53c and from D to A 1.3c. It may be doubted whether the C to A movement is profitable and the D to A movement certainly is not—although both of them, probably, may yield some margin above out-of-pocket costs.

When situations like this arise—and they are very common—the economic way to deal with them would, undoubtedly, be for the B to A railroad to make the reduction to 20c (since that rate will both hold the traffic and yield a profit); and for the railroads serving C and D to reduce their rates, if at all, then not below the point where they will still be earning a clear profit. But this limitation on the reductions at C and D would destroy the time-honored differentials of 3c and 6c. Increasing these differentials may make it difficult for the plants at C and D to continue to serve the A market, and may thus curtail (for the immediate future, anyhow) the tonnage of gussets moving on the railroads serving C and D.

There isn't any easy answer to this problem—but an answer must and will be found, because even doing nothing at all is one answer, although probably the wrong one. President Warren Brown of the Monon and this paper have joined in offering a couple of substantial prizes for the best answers to questions like this (see *Railway Age Forum* in our January 17 issue, page 15). The right answers would probably do more than any other one thing to insure the future growth and prosperity of the railroad industry.

ICC BUREAU REPORTS ON THE

Condition of Locomotives

The forty-third annual report of the ICC Bureau of Locomotive Inspection for the year ended June 30, 1954, shows a continually increasing percentage of locomotive units found defective out of the total number inspected, both with respect to steam locomotives and units "other than steam" (most of these being diesel-electric).

The number of steam locomotives for which reports were filed has now declined to 12,135 as compared with 27,135 for units other than steam. In 1954, 13.0 per cent of the steam locomotives inspected were found defective, the number of defects found being 9,763; 117 units were ordered out of service.

In the case of units other than steam 8.9 per cent of the 33,338 units inspected were found defective, these having 19,640 defects; 140 were ordered out of service.

NUMBER OF CASUALTIES BY OCCUPATION

Steam Locomotive Accidents

	Year ended June 30—									
	1954		1953		1952		1951		1950	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
Members of train crews:										
Engineers	1	13	4	23	1	36	2	51	2	64
Firemen .....	..	10	4	21	2	45	3	62	2	64
Brakemen .....	..	4	3	8	..	19	1	20	2	29
Conductors .....	..	2	..	3	..	3	..	6	..	4
Switchmen .....	..	..	..	2	..	2	1	8	..	5
Roundhouse and shop employees:										
Boilermakers .....	..	..	..	..	2	..	2	..	..	2
Machinists .....	..	2	..	1	..	2	1	2	..	1
Foremen .....	..	..	..	1	..	2	..	2	..	1
Inspectors .....	..	..	..	..	..	..	2	..	..	2
Watchmen .....	..	2	..	..	..	2	1	..	1	4
Boiler washers .....	..	..	..	..	..	..	..	..	..	..
Hostlers .....	..	..	..	..	..	8	1	4	..	1
Other roundhouse and shop employees .....	..	..	..	2	..	2	..	2	..	2
Nonemployees .....	..	..	..	..	..	1	..	3	..	4
Total .....	..	6	1	1	..	2	4	6	..	1
Total	1	39	12	62	3	126	14	170	7	184

Units Other Than Steam

	Year ended June 30—									
	1954		1953		1952		1951		1950	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
Members of train crews:										
Engineers .....	..	24	..	14	..	15	..	11	..	15
Firemen .....	..	29	..	36	..	31	1	30	..	21
Brakemen .....	..	7	..	12	1	12	..	4	..	3
Conductors .....	..	2	..	5	..	4	..	..	..	4
Switchmen .....	..	3	..	2	..	8	..	5	..	1
Maintenance employees	2	8	..	4	..	6	1	3	..	3
Other employees .....	..	2	..	2	..	1	..	13	1	2
Nonemployees .....	..	188	..	13	..	..	..	63	2	1
Total	2	263	..	88	1	77	2	129	3	50

CONDITION OF LOCOMOTIVES

	Steam 1954	Other 1949	Steam 1949	Other 1954
Number of locomotives for which reports were filed	12,135	12,692	33,866	27,135
Number inspected	19,999	30,684	85,353	83,338
Number found defective	2,599	1,238	7,035	7,395
Percentage defective	13.0	4.0	8.2	8.9
Number ordered out of service	117	20	436	140
Number of defects found	9,763	2,804	28,642	19,640

The percentage of those ordered out of service to those inspected continues to drop and this percentage is much lower in the case of units other than steam than it is with respect to steam.

The bureau's report now offers an opportunity for some interesting comparisons.

In 1949, when there were approximately as many other-than-steam units as there were steam units in 1954, the percentage inspected and found defective was 4.0 as compared with 13.0 in 1954. The percentage of other-than-steam units in 1954 is practically the same as it was for steam units in 1949. The number of units ordered out of service now is only about one third of what it was in 1949 for approximately the same number inspected. By the same basis of comparison the table of

(Continued on page 50)

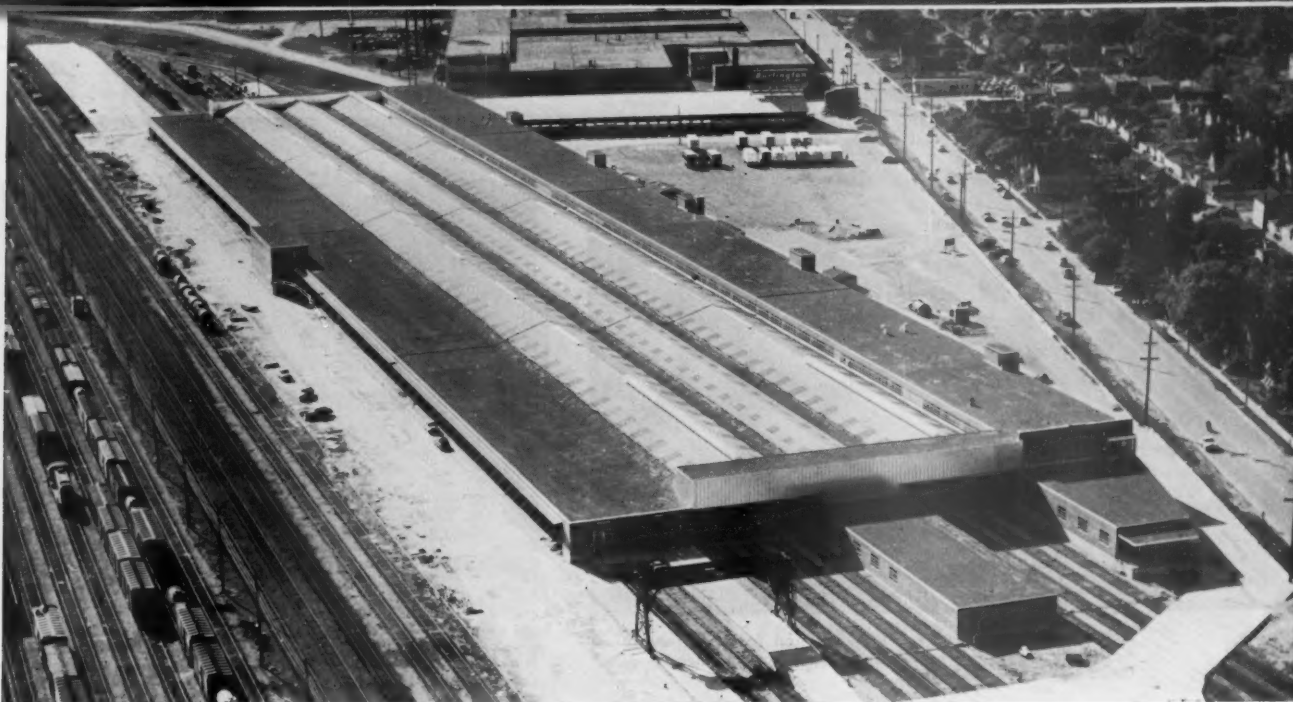
SUMMARY OF REPORTS AND INSPECTIONS

Steam Locomotives

	Year ended June 30—					
	1954	1953	1952	1951	1950	1949
Number of locomotives for which reports were filed	12,135	15,798	20,490	26,595	29,743	33,866
Number inspected	19,999	28,899	45,220	62,113	66,809	85,353
Number found defective	2,599	3,583	6,234	7,995	6,740	7,035
Percentage of inspected found defective	13.0	12.4	13.8	12.9	10.1	8.2
Number ordered out of service	117	163	370	508	399	436
Number of defects found	9,763	12,980	24,738	34,657	28,504	28,642

Locomotives Other Than Steam

	Year ended June 30—					
	1954	1953	1952	1951	1950	1949
Number of locomotive units for which reports were filed ...	27,135	25,374	22,716	19,320	15,719	12,692
Number inspected	83,338	75,170	65,263	52,948	42,503	30,684
Number found defective	7,395	6,571	6,087	4,375	2,748	1,238
Percentage of inspected found defective	8.9	8.7	9.3	8.3	6.5	4.0
Number ordered out of service	140	118	135	106	42	20
Number of defects found	19,640	17,163	16,613	11,935	6,325	2,804



VAST EXPANSE of freight terminal is shown by aerial view looking from east to west. Main building is 1400 ft long and consists of, from left to right: Outbound house, through-track shed, center-platform shed, another through-track shed and the inbound house. Freighthouse for Bur-

lington Truck Lines is attached to inbound house at upper right. Buildings attached to main house in foreground are: A cooper shop and "hot" room and "cold" room in center, and a garage at right. Road's three-track main line and main Chicago train yards are at left.

BURLINGTON FREIGHT TERMINAL—

Rail-Truck Operations Combined

New gigantic freighthouse and connected facilities near Chicago feature latest in freight-handling equipment, communications and layout, plus some rather unusual construction innovations

To obtain better coordination of its rail lcl business with that of its subsidiary, the Burlington Truck Lines, and to provide more adequate facilities in general for handling shipments in the Chicago area, the Burlington recently completed construction of a new freighthouse and auxiliary facilities at Cicero, Ill., (in the outskirts of the greater Chicago area).

The installation is strategically located adjacent to the road's main Chicago train yards, permitting quick transfer of merchandise cars to and from trains. The new terminal replaces an old freighthouse at Sixteenth and Jefferson streets in the heart of Chicago. All over-head cars from the east are now handled at the new freighthouse. Furthermore, it is possible to originate cars at Chicago for movement straight through to destination without additional working at outlying points.

How the Coordination Works

Through the rail-truck coordination program the handling of all lcl service between Chicago and Eola, Ill. (four miles east of Aurora) has been taken over by the Burlington Truck Lines with expedited service resulting in 24-hr faster handling. Coordination permits lcl business to be routed via either rail or BTL, whichever can give the best service to destination.

Representing, in all probability, the most extensive and up-to-date freight-handling facility constructed in recent years, the freighthouse comprises five principal operating sections: A house for exclusive use of the Burlington Truck Lines; an inbound house; an outbound house; a center transfer platform; and a section combining offices of the division, freight and BTL forces—all connected, all under one roof and all enclosed for protection from the elements.

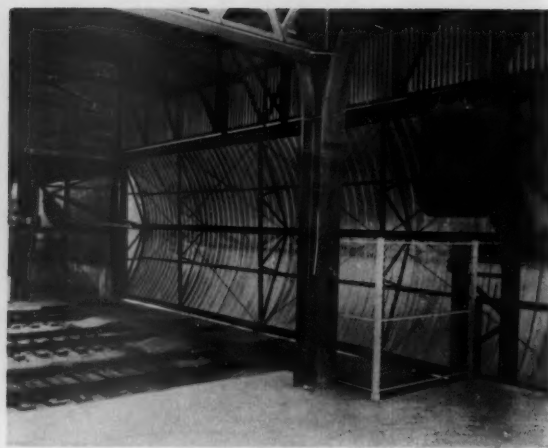
"Piggyback" Facilities Provided

Outdoor facilities include a gantry crane at each end of the house for unloading heavy materials, and two "piggyback" platforms, both equipped for end-loading of trailers on flat cars. Large expanses of concrete and asphalt driveways, aprons and parking areas have been provided to facilitate movement of vehicles around the area.

The freight-handling installation is part of an overall construction and modernization program being carried out in the Chicago vicinity. Included in the program was the relocation of the road's three-track main line from an alignment bisecting the train yards from end to end to a new location along the north side between the yards and the new freighthouse.



DOORS of the type originally designed for jet-interceptor-fighter hangars enclose track openings at each end of building. They consist of . . .



. . . STEEL TRUSSES covered with an aluminum skin. When opening, the door pivots on two semicircular rocker arms rigidly attached to door frame in less than 30 sec.

BURLINGTON FREIGHT TERMINAL— Structural Features Stand Out

An enormous construction project covering nearly half a million square feet under roof and incorporating some of the latest innovations in construction practice, equipment and materials — that's the Burlington's new 1st freight terminal at Cicero, Ill.

The new freighthouse structure comprises six principal components or separate structural units placed adjacent to each other and sharing common column supports. Each unit opens into those adjoining in such a manner as to give the feeling of being inside a single enormous structure under one roof. The facilities are laid out in an approximately east-west direction with the road's three-track main line on the south and 26th street along the north.

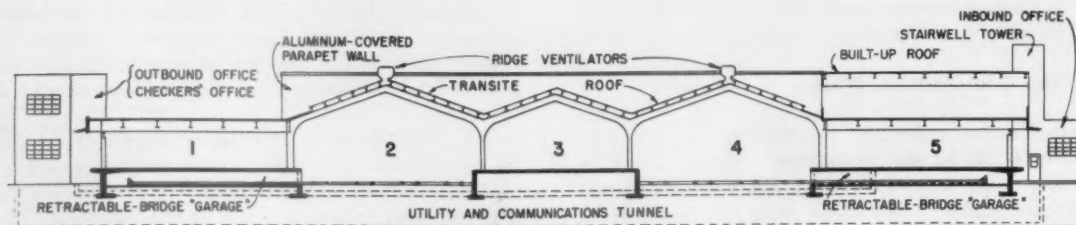
On the track side is a single-story flat-roofed structural-steel-and-concrete unit (No. 1 on drawing) with face brick exterior, that serves as the outbound house. This 60 ft by 1,400 ft portion of the freighthouse consists of a single, unobstructed concrete-platform area with a continuous system of wood overhead doors along the truck tailboard space on the south side. Adjoining the outbound house at about the center of the south side is a two-story building of steel, brick and concrete construction housing the outbound office on the first floor

and a centralized-checking-system office on the second.

Adjacent to the outbound platform along the north side are four through tracks, each with a capacity of 30 cars, which are housed in a steel rigid-frame shell (No. 2 on drawing) covered on the roof with sections of corrugated J-M Transite with interspersed panels of corrugated translucent plastic. The ends of the portion of the building housing the tracks are enclosed by special overhead doors of the airplane-hangar type.

Next to these tracks on the north is a 50-ft by 1,400-ft concrete center platform (No. 3 on drawing), used primarily for transfer shipments. This unit is enclosed in the same manner as that for the track area. Adjacent to this platform are four more through tracks enclosed in the same type of rigid-frame structure (No. 4 on drawing).

The north-side portion of the freighthouse is a two-story flat-roofed structural steel, concrete and brick unit (No. 5 on drawing), similar to the outbound section. It, too, is 60 ft wide, with the inbound house consisting of an unobstructed concrete platform area on the first level. A continuous system of wood overhead doors accommodates tailboard space along the entire length of the north side.



STRUCTURAL components, making up the freighthouse building, share common column supports and open into

each other to give, in effect, one large building under a common roof. BTL house is not shown.



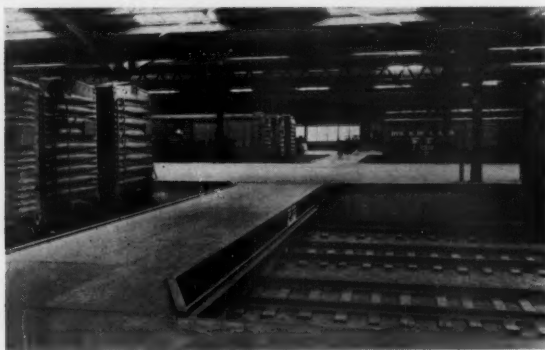
STEEL RIGID-FRAME bays enclose center platform and two sets of four tracks on either side. Platform areas are lit by quick-start fluorescent fixtures.

Attached to the inbound house at the first-floor level is a single-story inbound office. On the second floor, and running the full 1,400-ft length of the inbound house, are spacious offices containing separate sections for division offices, Chicago-area freight offices, and Burlington Truck Lines offices. In addition, there is a medical section equipped with the latest in medical and surgical facilities for employees in the Chicago area.

Attached to the inbound house at the west end is the Burlington Truck Lines house, the sixth of the principal building components (not shown on drawing), which opens into the main house. This portion of the freight-house was put in service early in 1953, and was described in the July 27, 1953, *Railway Age*, page 60.

Other facilities include a garage where tractors, fork-lift trucks and warehouse trucks are maintained and repaired, and a cooper shop, "hot" room and "cold" room, these being housed in two separate single-story steel, brick and concrete structures attached to the main house at the east end.

Facilities below the first-floor level include a boiler room, power substation, communications equipment rooms and a walk-through tunnel for distribution of the various utility and communications services to remote sections of the freighthouse.



ROLLAWAY CROSSOVER bridges span between platforms, providing runways for warehouse trucks. While cars are being switched, bridges are retracted into . . .



ROOF OVER rigid-frame structure is of Transite sheets with interspersed areas of translucent plastic sections. Over tracks the roof is topped by series of ridge ventilators.



TUNNEL, running transversely under house, carries all utility and communications services to remote sections and provides walkway for personnel.



. . . **"GARAGES"** beneath adjacent platforms. Bridges operate on channeled tracks and are powered by electric motors. Jacking mechanism raises bridge.

BURLINGTON FREIGHT TERMINAL—



ALL MERCHANDISE, except extremely large or heavy packages, is handled on warehouse trucks which are moved

between the various car and truck spots by under-floor endless-chain systems.

How It Operates

The ability to handle 275 trucks and 240 railroad cars at one time makes the Burlington's new rail-truck freight terminal at Cicero, Ill., one of the largest freight-handling facilities in operation today. At this early date in its operation, conservative estimates of the capacity of the new installation, after an initial break-in and organizing period, run as high as 1,500 tons per 8-hr shift.

Freight-handling functions in the house are divided into four main parts, although they operate as an integrated unit. The four divisions are: Inbound, outbound, transfer and Burlington Truck Lines.

Cars arriving at Chicago for unloading and delivery of merchandise in the immediate Chicago area are handled in the inbound house. Shipments leaving Chicago for outlying points and those being transferred

from incoming cars to outgoing cars are handled in the outbound house. The BTL house takes care of inbound, outbound and transfer shipments which have exclusive BTL routing, as well as interchange shipments with the parent railroad.

The terminal is currently operating on a single 8-hr shift from 8 a.m. to 5 p.m. The eight house tracks are set up with loads and empties before the shift begins; however, late arrivals are spotted as soon as they reach the train yards on incoming trains. As much as possible, cars for particular trains are grouped on the tracks so as to reduce switching and expedite their transfer to the train yards for placement on outgoing trains.

Switching of the house tracks can be performed from either end of the eight through tracks, thus facilitating setting up of the house in the morning, spotting of late arrivals during the day and pulling of the house tracks in the evening. Each track at each end of the house has a derail which is interlocked electrically with the track

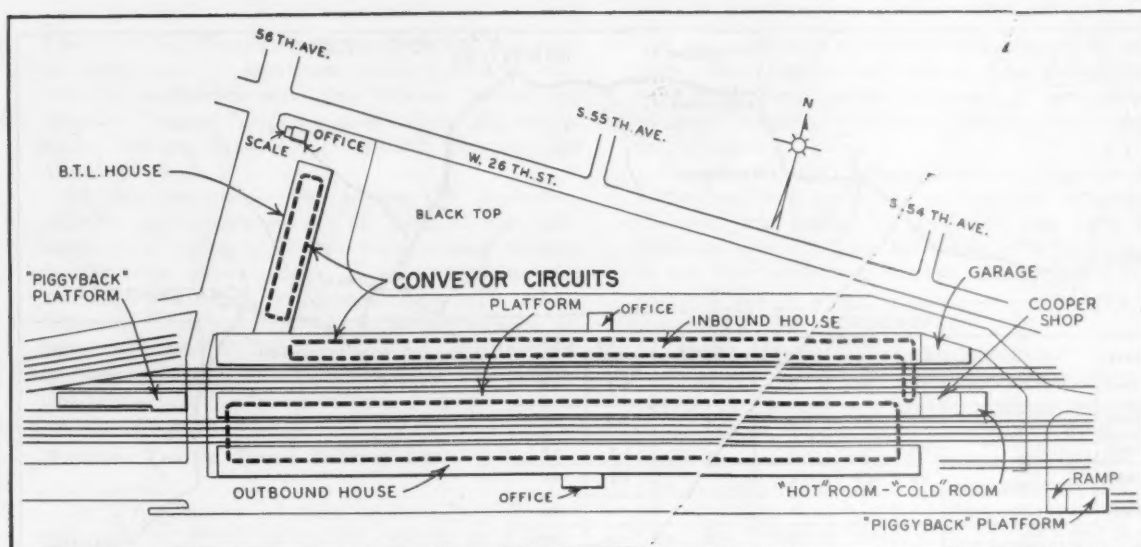
Communications System . . .



FREIGHT-HANDLER working in a car or trailer calls off information on shipments into a reel-mounted talk-back speaker which relays message to a . . .



. . . CHECKER who sits at a soundproofed desk above outbound office. Desks are provided for 20 checkers, each of whom communicates with up to five freight handlers.



TERMINAL arrangement is designed to coordinate functions in all sections of the freight house. Three endless-

chain systems serve the platform areas. Warehouse trucks can be transferred from one chain to another.

doors, the roll-away crossover bridges between platforms and the endless-chain systems by means of which platform trailers are drawn around closed circuits. Before a derail can be thrown, the track doors must be open, the roll-away bridges retracted from across the tracks and the chains stopped.

There are 60 designated car spots identified by numbers, alternating from 1 to 60 between the outbound and inbound platforms. Odd-numbered spots are on the outbound platform, while the even-numbered ones are on the inbound side. The two sets of tracks are designated as runs and are each numbered 1, 2, 3 or 4 for the four tracks in each set. Each outbound car is also identified by a number based on its destination. Thus, for example, we have spot 29, run 3, car 44, meaning location 29—which would be about the middle of the outbound platform—the third track over and a car destined for Galesburg. Truck spots are numbered counterclockwise around the entire house, beginning with

No. 1 at the northwest corner of the BTL house and ending with No. 275 at the northeast corner of the BTL house.

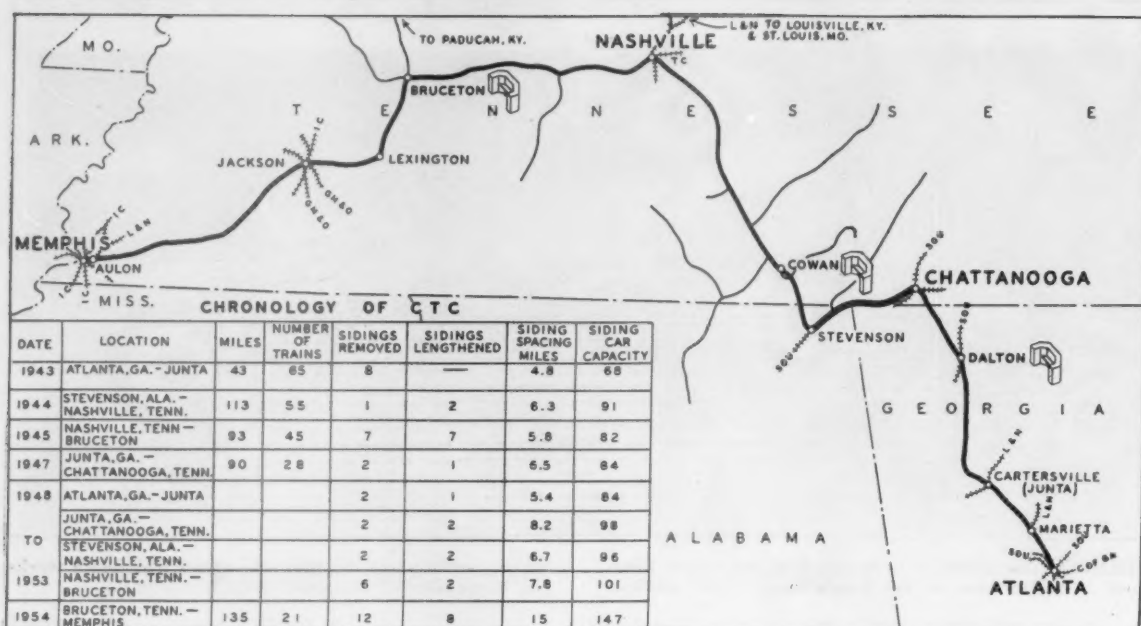
A complete communications system serves the platform areas and offices. The system includes a centralized-checking installation with outlets for plugging in portable talk-back speakers located at intervals along the inbound platform on the track side and along the outbound platform on the truck side. Individual soundproofed desks in the checkers' office will accommodate up to 20 checkers, each of whom communicates with up to five freight handlers. In addition to the checker system, there are permanently mounted talk-back speakers providing voice communications between platforms and offices. Paging speakers, which can be controlled locally from several platform locations, as well as from offices, are strategically located around the house. The entire communications system was furnished by the R. W. Neill Company.



MAIN CONSOLE and switchboard in outbound office is the "nerve center" for the centralized checking system and other "intercom" and paging circuits.



PNEUMATIC tube system supplied by Kelley Company, connects various offices in house and general office. It is used to transmit waybills and other pertinent matter.



What CTC Did for the Dixie Line

- Reduced operating expenses
- Increased existing track capacity
- Obviated laying of second main track
- Expedited train movements



CTC MACHINE at Bruceton, Tenn., 27.5 ft. long, controls switches and signals on 228-mile Nashville-Memphis line.

The Nashville, Chattanooga & St. Louis has completed the installation of centralized traffic control on 466 miles of single-track main line between Atlanta and Memphis. The last "gap" was closed when CTC was installed between Bruceton, Tenn., and Memphis last August.

All single-track main line is now CTC controlled, while the double-track sections are equipped with automatic block signaling. Double track is used through the Nashville terminal area (4 miles) and between Stevenson, Ala., and Chattanooga, Tenn. (39 miles). Automatic block signaling was in service between Atlanta and Nashville, but there was no signaling west of Nashville. Train movements formerly were authorized by timetables and train orders.

Wartime Traffic Taxed Existing Line

The preponderance of traffic is from Nashville east and south to Atlanta where the railroad is a north-south bridge route from Chicago to Atlanta and Florida. For example, two daily Chicago-Florida passenger trains operate over the NC&StL between Nashville and Atlanta.

During the war, this was a route important for freight and war material from the North and Midwest to the Seaport of Savannah, Ga. By 1942, the increase in traffic due to the war effort had on some parts of the line reached the point of creating bottlenecks. One such section was the 43 miles of single track between Atlanta and Junta, Ga., used also by the Louisville & Nashville, which handled upwards of 65 trains daily. Rolling grades and many curves (175) kept maximum speeds down to 45 mph for passenger trains and 40 mph for freights.

To relieve this situation, the NC&StL management decided to install centralized traffic control in 1943. Laying a second main track would have increased track capacity, but train movements still would have had to be authorized by timetable and train order, whereas with CTC train movements are authorized by signal indication with resulting expedition.

To further expedite trains east of Nashville, CTC was installed in 1944 in the heavy mountain grade and curve territory between Nashville and Stevenson, Ala. (113 miles). The remainder of the Nashville-Atlanta single-track main line, 86 miles between Chattanooga and Junta, was equipped with CTC in 1947.

Dieselization Affects Signaling

The NC&StL began dieselization in 1948, and by 1951 all main-line trains were being handled by diesel-electric locomotives. The use of diesels on freight trains materially affected the CTC systems then in service. Trains were twice as long as before, with 80 cars and more, compared to 39. The tonnage rating on some divisions was increased from 1,500-2,000 tons to 5,000-7,500 tons. Longer trains meant longer passing tracks, with the result that some sidings had to be lengthened. Also some sidings could be removed because the diesels made better over-the-road time than the steam freights, partly because they did not have to stop for fuel and water.

Between 1948 and 1953, therefore, the NC&StL car-

ried out a program of passing track changes to secure more efficient operation with diesels. Some passing tracks were removed and others lengthened in traffic control territory, resulting in longer passing tracks spaced further apart.

Concurrently track and roadway improvements were undertaken, with particular emphasis on a reduction in curves and grades. Ninety-three curves have been eliminated and 137 have been reduced to two degrees or less. New heavier rail was laid; 132 lb east of Nashville and 115 lb west.

Three Dispatchers Handle Trains

Three dispatchers now handle all train movements on the NC&StL. This has been made possible by the CTC installations, enabling them to control switches and signals in traffic control territory from three control machines: Dalton for Atlanta-Chattanooga (133 miles); Cowan for Stevenson-Nashville (113 miles); and Bruceton for Nashville-Memphis (228 miles). These dispatchers also handle branch-line trains which operate under timetable and train order authority. All train operation is directed by three sets of dispatchers, each including one chief dispatcher, one assistant chief dispatcher, three trick dispatchers and two relief dispatchers.

With the introduction of the 40-hr week in 1948, 4.2 operators are now needed where three formerly were required. Eight dispatchers and 58 operators have either retired or have transferred to other departments as a result of the CTC installations. With the 40-hr week these 66 men would be equivalent to 92.4 men. In salaries alone a considerable reduction in operating expense has been accomplished.

CTC Expedites Trains

Another benefit of the CTC has been the reduction of over-the-road time, thereby cutting down the amount of overtime of train crews, which results in lower operating expenses. For example, in the first year of CTC operation on the Chattanooga division, overtime charges were reduced by \$84,000. Studies of time savings by through freight trains revealed that 4 hr 35 min were saved in a run from Bruceton to Atlanta. Now a through freight from Memphis to Atlanta is estimated to save at least 5 hr. This reduction in over-the-road time has enabled symbol freight trains to make connections with other railroads consistently, thus providing improved freight service.

Local freight service has improved because these trains can leave a town when ready. They had no preference prior to CTC, and generally were allowed to leave only when "everything else had gone." The local train crews are paid on a time basis, resulting in overtime being a major factor in their operating expense. This overtime has been drastically reduced since the installation of CTC.

The engineering and construction of these CTC projects was directed by E. W. Anderson, signal and telephone engineer. The major items of signal equipment were furnished by the Union Switch & Signal Division of Westinghouse Air Brake Company.

SHIPPERS NEED AN ...

"Uncommon Freight Car"

For many years railroad freight car design has tended to adhere to certain standards, right or wrong. Really novel departures have been too slow in developing. This suggests a partial reason for the apparent ease with which other forms of transportation have been able to invade the market of railroads, notwithstanding the recognized fact that the railroads' cost per ton-mile is often the lowest of all overland transportation.

Users of freight cars, whether for military, industrial, commercial, agricultural, or civilian defense purposes, need freight cars of the right type and proper quality or fitness made available when and as needed, which are then handled to destination within a predictable time and without damage to lading or car. Accomplishment of this reasonable objective requires *uncommon* rather than common or ordinary qualities in the freight car.

Let me overstate the problem by an example. When a shipper decides on truck shipment he is able to specify the kind of truck and required transit and delivery time. Either he gets exactly what is needed or he is unable to obtain truck service. When a shipper decides to ship via rail, he has in mind a certain type of car and an estimated transit and delivery time. All too often he considers himself lucky if the car, the transit time, and the delivery at unloading siding approximate his needs. However, he always gets a freight car, since the railroad is our only complete common carrier service that always and somehow is available to every shipper. In fact the American railroads' service as a complete and universal common carrier may be the cause of this occasional lack of perfection in selection, placement and handling of freight cars.

Uncommon qualities in railroad freight cars are required to offset this common situation.

The subject of uncommonness in freight cars divides into three major parts. There is need for construction of new types of freight cars, including substantial improvement of conventional designs for present cars. For specific uses, there is great need for raising the average fitness or quality of freight cars. There is need for review and improvement in the numerous rules, regulations and practices governing freight car use.

While the freight car fleet must be adequate in number, it is my belief there has been somewhat too much concern about the size of our freight car fleet and not enough concern about the need for construction of new types of freight cars and of greatly improved types of existing freight cars.

[Here Mr. Morewood cited heavy-duty flat cars; 65-ft. or long, gondola cars; and covered hopper cars as "comparatively new types of cars and conspicuous examples of useful types of cars" which "have become possible because of better design, better materials and better railroads." He also outlined briefly the part which his own company played in their development.—EDITOR]

The box car has been a common and unspecialized vehicle for many decades. There is need for a well-

Says D. M. MOREWOOD

Assistant vice-president—traffic,
United States Steel Corporation



"Users of freight cars . . . need cars of the right type and proper quality made available when and as needed, which are then handled to destination within a predictable time and without damage to lading or car. Accomplishment of this reasonable objective requires uncommon rather than common or ordinary qualities in the freight car itself." What some of those "uncommon qualities" are, and some suggestions as to how they may be achieved, were outlined by Mr. Morewood, in a January 20 address to a joint meeting of the Atlantic States Shippers Advisory Board, the Traffic Club of Philadelphia, and the Women's Traffic Club of Philadelphia—an address which contained so much of interest to railroad men that it is reprinted here, substantially in full.

designed box car for carload packaged and bundled commodities, and there is need for a well-designed box car for bulk and bag loading. These two types of use have different design requirements. As one observer, it has long been my belief that the effort to maintain one general box car classification is holding back progress. What is needed is recognition of more than one kind of box car and construction of a supply of various kinds.

The basic design requirements for the industrial box car are well known. They include a door at least eight feet wide, a strong, well supported floor throughout, and threshold plate reinforcement of the floor between the doors so a heavy lift of lading can be trucked into and placed on the floor at either end of the car without danger of damaging car or lading or injuring the truck operator.

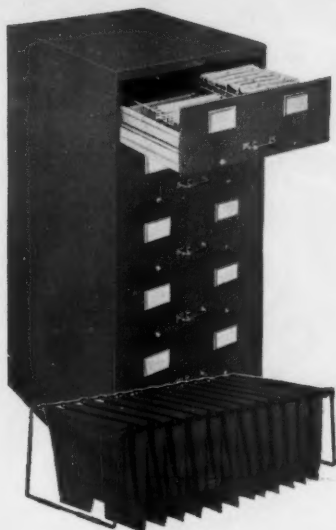
Requirements also include improved draft gear to absorb more of the end impact shocks, and snubbers or other devices to lessen and dampen vertical oscillation and sidesway. This industrial type of box car should also include interior fittings designed to hold the lading in place. In other words, the packaging and dunnage (Continued on page 48)

Remington Rand

BETTER BUSINESS METHODS

For Greater Profits
Through Lower Costs

Freight Bill File With FlexiFile Prevents "Ride-Up" Or "Slip-Under"



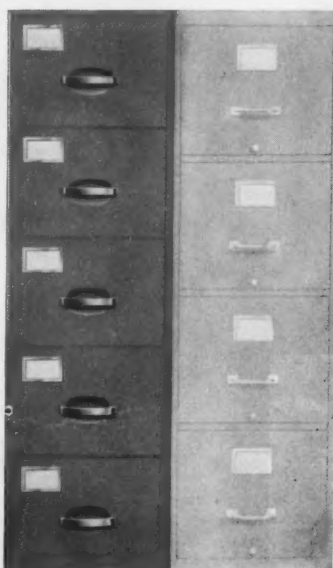
Prevent "ride-up," "slip-under" and "lost bills" with the new Freight Bill File equipped with FlexiFiles. There's *no* chance of bills sliding to the drawer bottom. The drawers of this new Freight Bill File are the "just-right" size for standard freight bills.

FlexiFile is a series of 12 continuous cloth pockets, stitched around parallel steel riders and mounted on a steel frame. The pockets fit snugly to full drawer depth. Each pocket can hold from two to three hundred freight bills making for easy expansion. Send for your free copy of LBV701 for complete information.

Save Up To 50% On Costly Filing Floor Space

New Remington Rand Kompakt Files can save up to 50% of your costly filing floor space (\$3.00—\$6.00 per square foot)...give you an *extra drawer* in every file *without adding to its overall height*. The desk-height Kompakt file has 3 letter or legal-size drawers instead of 2...counter-height Kompakt has 4 instead of 3 drawers...5-drawer Kompakt is no higher than the regular 4-drawer file...6-drawer Kompakt is comparable to a 5-drawer file!

And Kompakt—the file with the *extra drawer*—has smoother operation...modern, streamlined appearance...greater strength, rigidity and durability! Get big 10-page broadside showing detailed floor diagrams of dollar space savings—Circle LBV692.



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C669

P835

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RR-14

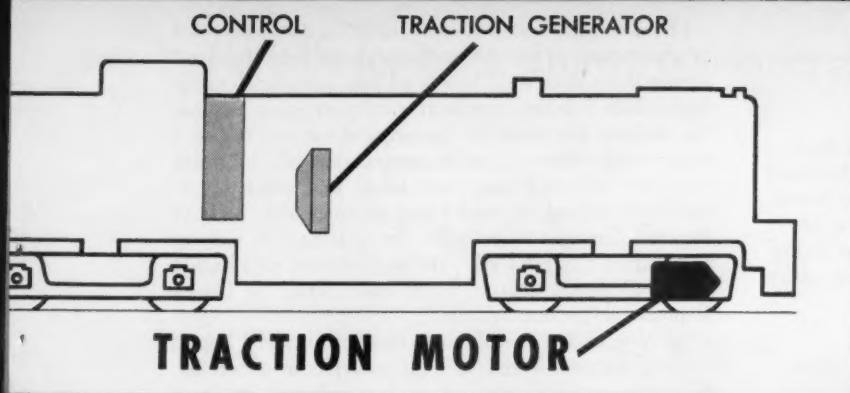


MORE WORKING MATERIAL in GE-752 motor (12 percent heavier than any other motor offered for standard application) means higher ratings. The effective use of additional active copper and iron results in the most powerful traction motor available today.

GENERAL  **ELECTRIC**

SHUNT

3 REASONS WHY THE G-E TRACTION SYSTEM SETS THE INDUSTRY STANDARD



THREE SUPERIOR COMPONENTS, installed as an integrated system, help you get rugged, flexible motive power that assures better locomotive utilization and easier maintenance.

G-E traction motors give you 15% MORE CONTINUOUS TRACTIVE EFFORT

In day-to-day operations, the heavier loads consistently go to locomotives with G-E traction motors. The GE-752 motor gives you 15 percent higher continuous tractive effort, at comparable gearings, than any other motor offered today. This extra capacity accounts in large measure for its record of low maintenance costs and low percentage of failures.

MOTOR OVERHEATING ELIMINATED

With 65-mph gearing, the GE-752 is the nearest thing yet to a self-protected traction motor. Unless your operation is most unusual, you can forget about short-time ratings with this gearing. Motor torque will slip the wheels long before the current developed is high enough to cause motor failures.

HIGHER LOCOMOTIVE UTILIZATION POSSIBLE

The capacity of this traction motor is helping many railroads attain better locomotive utilization, an important factor in lowering operating costs. For example, when your locomotive is equipped with G-E motors geared to 75 mph, it still has a high enough continuous tractive effort to permit dual-purpose operation. In most cases you have the speed to meet express and passenger schedules without sacrificing the tonnage-hauling capacity for freight. Locomotives with GE-752 motors geared to 75 mph are equally adaptable to divisions with level runs and those where mountain grades are encountered.

Ask your G-E Apparatus Sales representative for more information about this motor—one of the superior components of the traction system that sets the industry standard. General Electric Co., Schenectady 5, N. Y.

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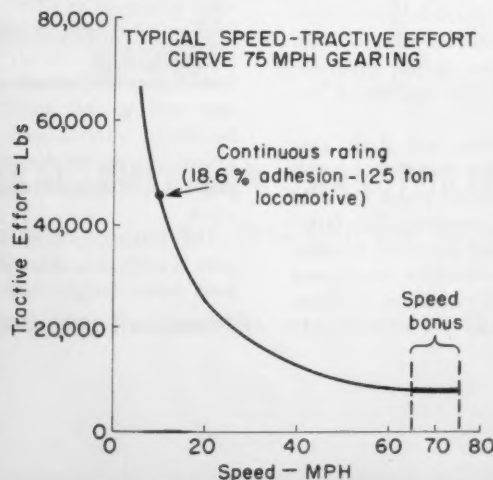
Progress Is Our Most Important Product

GENERAL  ELECTRIC

SEPARATELY MOUNTED PINION requires lower maintenance. Largest in standard use, 4 3/4-in. pinion shaft reduces chance of fatigue breakage.

DUAL-PURPOSE 75-mph gearing of GE-752 motors provides continuous tractive effort into the self-protecting slipping range, as well as a bonus of 10 mph in top speed.

LARGEST PINION-END BEARING in railroad use can take heaviest duty. Sealed bearing needs no inspection between overhauls.



"UNCOMMON FREIGHT CAR"

(Continued from page 44)

required to make the lading float or slide on the floor of the box car, as is the present practice, can be eliminated if the car is designed properly to ease longitudinal shocks. With such an improved car, the lading could be firmly clamped or held in place on the floor just as lading is clamped and held in place on the floor of a motor truck.

Other problems must be solved.

Weather Protection

Many commodities, including steel, require protection from weather, yet are loaded on open top cars or trucks because both shippers and receivers find it advantageous and less costly to load and unload with overhead cranes. This material must be wrapped and shrouded with paper when loaded on open-top rail cars. However, it can usually be shipped by truck with no other protection than the tarpaulin furnished by the trucker.

The expense of this weather protection and of blocking and bracing provided for each individual load shipped in gondola cars, not essential when loading trucks, can and should be avoided by construction of another "uncommon" freight car. The problems of designing reusable covering and permanent cradles are not insurmountable. The trucking industry has contributed effective tie-down devices which also should be incorporated in any such car.

Proper solution of these problems are sure to help railroads in their efforts to compete. It is with real interest that we note efforts now being put forth by a number of railroads to design such equipment. Competition is the driving force behind these efforts, and there is reason to believe that, although belated, much good will come from increased attention to the problem of delivering goods safely, speedily, and economically.

Significance of Speed

Speed is a very important requirement if railroads are to meet their competition. Speed, too, is pointing up the need for "uncommon" car design. I have mentioned briefly the absorption of end impact shock and of dampening of vertical oscillation and sidesway as part of the problem. The increased number of modern hump yards, faster switching in flat yards, the higher speed and heavier tonnage trains made possible by modern diesel and electric locomotives, make it painfully apparent that the common freight car is not built for switching at such speed and that the uncommon car is badly needed.

Improved trucks, spring suspension and draft gear designed to absorb a much heavier impact which is common today will minimize the beating which not only the lading but also the car itself receives. The faster movement is desired by industry and provided by competition. New car design and construction must meet these requirements by building in resistance to these hazards of today's rail transportation.

I have recently reviewed some statistical data assembled by a company in the railroad equipment field. Included among these data were results of two substantial samplings which I believe are worthy of your consideration. An analysis was made of the crippled-car records of a large repair shop on an important railroad, in which over 12% of car damage was found unquestionably to have been caused by impact and approximately 38% of the total damage was probably due to impact. If damage to common cars is in this ratio as compared to all other car repair work, damage to the load caused by impact is probably greater.

Another review reveals that classification yard impact ranging between 5 and 11 mph occurred in connection with approximately 64% of all cars switched in classification yards. The same study indicates that cushion draft gear, while minimizing damage to the car, also lends itself to lower cost for repair when damage actually does occur.

The GARX, GAEX and similar types of box cars, by use of different truck design and means of cushioning end-to-end shock, are good examples of build-in resistance to damage. Improved trucks and other devices to protect lading against some of the effects of higher speed and greater shock have been available for some time, but are not, up to now, widely used. Many of the new common cars being built today are not equipped to stand up under today's speeds or to afford full protection to lading. Competition and cost of freight loss and damage demand action.

We shippers have a direct interest in this cost—because, in the end, we pay for it. I agree there are many factors other than riding qualities of freight cars that are involved. It is my belief that improved riding qualities and increased cushioning of slack action built into railroad cars will reduce materially damage to freight.

[At this point in his talk Mr. Morewood referred to a recent study by David E. Smucker, president of the Detroit, Toledo & Ironton, in which he analyzed some aspects of the "special equipment" problem. Mr. Smucker's views were reported in detail on page 29 of the *Railway Age* of December 6, 1954.—EDITOR]

There is a great deal of thinking going on in railroad circles today, some so forward as to remind one of Jules Verne. Lighter weight cars are visualized, designed with underframes that will provide sufficient strength with a great deal less weight, and the use of welded construction with modern steels further to reduce weight; with bodics connected to underframe in such a manner as to reduce end-to-end shocks in classification or road-haul service.

Use of trailers on flat cars may evolve into specialized bodies that will greatly minimize damage to lading. It may well be that such specialized equipment may not be freely interchanged. However, by appropriate revision of car service rules and per diem rules, such problems of interchange should not be too difficult to solve.

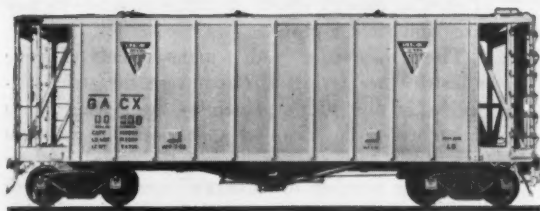
Our interest as a steel company in uncommon freight cars is both as a shipper and as a supplier. We urgently need better freight cars to carry our product at speeds

(Continued on page 50)

No bills for bags, drums, containers!



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Airslide cars now successfully shipping flour, semolina, sugar, starch, plastics, chemicals and other products

CONDITION OF LOCOMOTIVES

(Continued from page 36)

casualties classified according to occupation might indicate that the replacement of steam power by diesel-electric has not necessarily made the railroads "a safer place to work."

The report includes tables showing parts found defective. On units other than steam those most responsible for ordering units out of service were brake equipment, fuel system parts, engine parts, sanders and unsafe cab floors, aprons and deck plates. The latter defects were principally due to oil leaks.

Two excerpts from this year's report are of significance in connection with any efforts to reduce the number of defects that may be found on locomotives. One is as follows: "One person was killed when his clothing became entangled around a moving and unguarded fan shaft as he attempted to obtain a water sample from an inconveniently located water glass drain cock. Three other persons suffered amputation of a total of nine fingers and two of these also had arms broken when caught in auxiliary generator drive belts that were not properly protected. Because of limited space within bodies and under hoods of diesel-electric locomotive units, complete protection of moving and rotating parts is essential if accidents are to be avoided."

The other says: "Three crankcase explosions and two fires about diesel engines resulted in injuries to six persons. Electrical fires in engine compartments, about units, short circuits and explosions caused by flash-overs in electrical cabinets caused injuries to nine persons. Because of danger of fires resulting from the liquid fuel and the high pressures and temperatures used in diesel engines and the possibility of accident from electrical short circuits, a high standard of inspection and maintenance is required at all times if accidents are to be avoided."

"UNCOMMON FREIGHT CAR"

(Continued from page 48)

and with ease of loading and freedom from damage comparable to our experience with thousands of truck shipments.

In bringing to your attention the need for the "uncommon freight car" I do not wish to leave the impression that the present car pool should be forgotten. On the contrary, I subscribe heartily to the platform recently adopted by the National Industrial Traffic League. After expressing concern about the decline in ownership of freight equipment, the large and growing number of bad order cars, and the decline in number of new cars on order, the league proposed to urge carriers to upgrade their existing equipment, to replace obsolete cars, many over 25 years in service, with modern cars to more nearly meet present day needs, and also to stimulate better car repair programs. On this latter point, common cars undergoing major repairs may well be a fruitful source for graduating such cars into the "uncommon" class.

Benchmarks and Yardsticks

IN COUNTRIES where the railways and other industries are socialized and do not have to earn taxes or a profit, it has not been the experience that the service they provide is better or more economical than it is on this continent—usually quite the contrary, in fact. When management does not *have* to operate with sufficient efficiency to earn a profit, it usually doesn't. When it doesn't *have* to keep costs down and service standards high to hold its customers, it usually doesn't do so.

The result is that, where the profit motive is removed, service is usually neither economical nor satisfactory, and the government gets no tax revenues from the enterprise to support national defense, schools and other government functions.

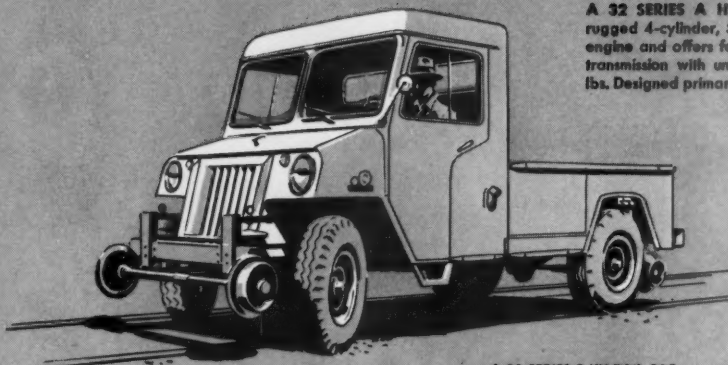
The newspapers recently reported that this country's largest automotive manufacturer earned over \$800 million in net income in 1954. Such earnings mean that this company paid more than that sum in federal income taxes—to say nothing of the large tax payments to state and local governments. Would anyone suppose that automobiles made in untaxed government plants in (say) Russia are less expensive or better than those produced by this great American corporation?

The point is that, by putting management under the discipline of the profit motive, the people as a whole get better products and lower prices, and labor gets better pay—than if the profit motive were removed. Acceptance of the profit principle, then, is not a concession to human greed at the expense of the people as a whole—as left-wingers often like to portray it. Instead, the profit principle is a device which induces self-interest to work to the advantage of the general welfare. The only people whose liberties the profit principle restricts are the managers. Their jobs would be far easier and probably more secure if they were freed—as socialized enterprises are—from the necessity of earning enough above operating expenses to pay taxes and yield a profit.

There is evidence that managements of some industries are trying to circumvent the strict discipline of the profit principle—by getting more and more of their capital and operating expenses transferred to the taxpayers. At the same time, an increasing number of "liberals" are looking with favor on private enterprise, because they are beginning to understand that private business produces better goods at lower costs to consumers than socialized enterprises; and, in addition, pays taxes. It is somewhat ironical that business managers should be getting more tolerant toward socialistic practices at the very time when former socializers seem to be developing a "capitalistic" viewpoint.

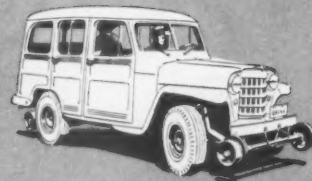
J.G.L.

LOOKING FOR A NEW IDEA IN maintenance transportation?



A 32 SERIES A HY-RAIL CAR is powered by a rugged 4-cylinder, 59-h.p. or a 6-cylinder, 100-h.p. engine and offers four-wheel drive and three-speed transmission with underdrive. Will carry up to 1500 lbs. Designed primarily for on-track inspection service.

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A 30 SERIES B HY-RAIL CAR features a 6-cylinder, 115-h.p. engine. Will carry as many as 10 men under ordinary driving conditions. 2200-lb. load capacity.

You'll find the answer at *Fairmont*

The requirements of maintenance transportation are as varied as they are numerous. And, in keeping with Fairmont's policy of providing the perfect product for every maintenance task, Fairmont manufactures a wide variety of motor cars that encompass every imaginable transportation need. Perhaps the most dramatic of these are the Fairmont Hy-Rail Cars—representing a new concept of maintenance transportation that is meeting with great approval throughout the industry. Fairmont Hy-Rail Cars are designed to travel on both road and rail with equal ease—thereby providing unusual economy of operation and great savings

in change-over time. When on the road, of course, the Hy-Rail travels as an ordinary highway vehicle. And on the track, it is positioned by retractable guide wheels, with the regular tires carrying the load. Fairmont Hy-Rail Cars are unusually simple to operate, and offer the traditional Fairmont qualities of dependable design and sound construction. If you have been looking for a new idea in maintenance transportation, we urge you to investigate the application of a Hy-Rail Car to your particular operation. We will be most happy to serve you—and we are certain that you will find the complete Hy-Rail story of great personal interest.

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MANUFACTURERS OF INSPECTION, SECTION AND GANG CARS, HY-RAIL CARS, MOTOR CAR ENGINES, PUSH CARS AND TRAILERS, WHEELS, AXLES AND BEARINGS, BALLAST MAINTENANCE CARS, DERRICK CARS, OIL SPRAY CARS, GROUTING OUTFITS, TIE RENEWAL EQUIPMENT, RAIL RENEWAL EQUIPMENT, WEED CONTROL EQUIPMENT.

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Year of Decision

At the end of each year, for nearly a century *Railway Age* has paused to look back for a moment and reflect on what has been accomplished in the railway industry . . . and to look ahead to a future which only time will reveal.

What about the old year? It's history now—its successes and mistakes are guide posts on the road ahead.

With its many years of experience, *Railway Age* can help you to read those signs more accurately . . . help you to be prepared to meet future problems that may arise.

Like every year that has gone before, 1955 will bring advances in technology; changes in administration; new approaches to maintenance and operation; and many other new concepts of railroading.

But more than any other year, 1955 will be a year of decision.

To regress, by resting on past laurels—or to progress, by meeting new demands and wants—that decision must be made.

Railway Age, with its progressive, up-to-the-minute reporting, is prepared to help you in this important year.

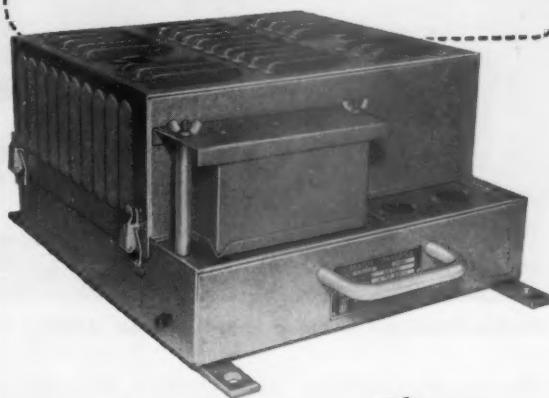
Take advantage of this authoritative railroad information, by having your own personal copy of *Railway Age* mailed to your home.

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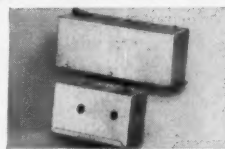


A New Low-Cost ^{Convertible} R.R. Converter

Yes, it's a new Cornell-Dubilier idea. Install the single vibrator economy Model 3600 converter now and convert to a dual vibrator, automatic switchover unit at any future time. Change over in a few seconds without tools.

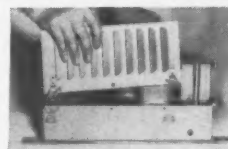
Same rugged dependability as the nationally famous "3200 Series C-D RR Converter" but priced for low cost initial (single vibrator) installation. 50% longer vibrator life expectancy.

Write for Bulletin EB-3600, Cornell-Dubilier Electric Corp., Dept. RA25, Indianapolis Division, 2900 Columbia Ave., Indianapolis, Indiana. Affiliated Member A.A.R.



CONVERSION KIT

Consists of Standby Vibrator and automatic Switch. Can be purchased whenever you're ready for dual vibrator service.



INSTANT ACCESSIBILITY

Trunk hasp affords quick access for conversion. Either RACK or BULKHEAD mounting, as ordered.



PLUG-IN CONVERSION

Field changeover like a vacuum tube. Kit can be plugged-in in minutes without tools.



COMPLETE UNIT

Available initially for dual vibrator operation factory equipped with automatic changeover feature.

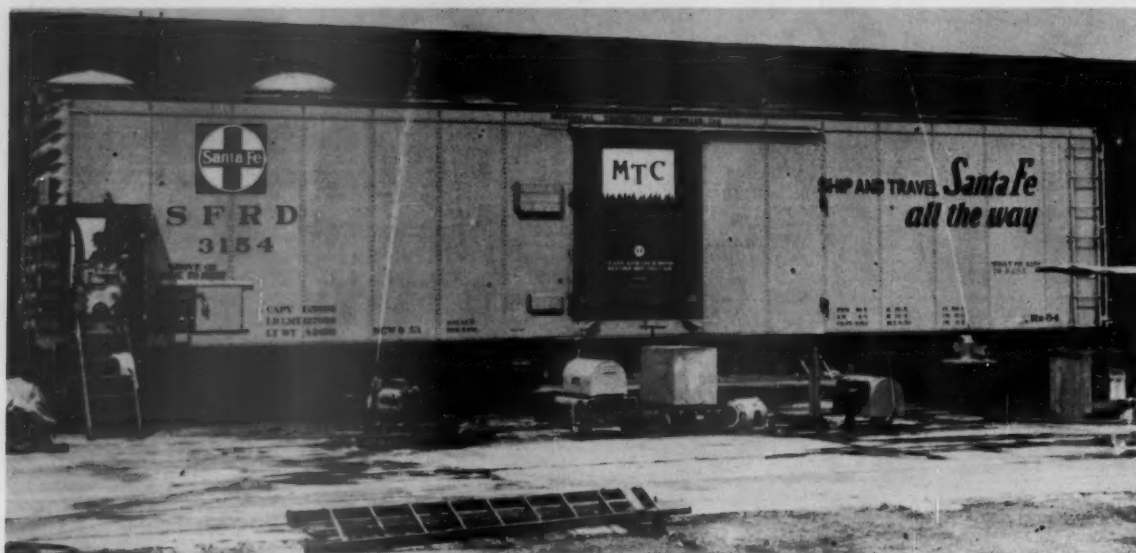


CONSISTENTLY DEPENDABLE
CORNELL-DUBILIER

VIBRATOR CONVERTERS

For Industrial—Marine—Railroad and Appliance Services

PLANTS IN SO. PLAINFIELD, N. J.; NEW BEDFORD, WORCESTER & CAMBRIDGE, MASS.; PROVIDENCE & HOPE VALLEY, R. I.; INDIANAPOLIS, IND.; FUYQUAY SPRINGS & SANFORD, N. C.; SUBSIDIARY: RADIANT CORP. CLEVELAND, O.



A REFRIGERATOR CAR being cooled down to operating temperature after inspection.

Servicing Mechanical Reefers . . .

HOW THE SANTA FE DOES IT

In anticipation of their more general use, the San Bernardino shop is being equipped to inspect and maintain mechanical refrigerator cars

The Santa Fe has developed means for maintaining mechanically refrigerated cars at its San Bernardino, Cal., shop, and is increasing and improving its facilities to take care of the rapidly growing number of such cars.

Mechanical refrigerator cars require pre-trip, monthly, two-month, semiannual and annual inspections. San Bernardino makes part of the short term inspections and all annual inspections. It also performs all heavy overhaul, including all engines and compressors.

Thirty-six items appear on the pre-trip inspection requirement sheet. These include checking all oil, water and refrigerant levels and pressures, making sure there are no leaks, cleaning of screens, strainers, sumps and pans, checking the operation of protective and operating devices, measuring battery electrolyte gravity and charging current, checking motors for correct rotation, adding lubricant where necessary and filling fuel tanks. Finally, with all equipment functioning properly, the car is cooled down to -5 or -12 deg F.

Since the climate at San Bernardino permits, all such work is done in the yard. During the cooling-down run the exterior of the car is sprayed with water. Evaporation is high and cooling time is materially reduced in this manner. On one test run, the interior temperature of a car was reduced from $+27$ deg F to -1 deg F in 3 hours. Without the spray, it is difficult to bring the temperature down in the time available.

During the monthly inspection, all of the pre-trip

inspection is repeated and, in addition, filters are changed, linkages lubricated, the refrigeration system checked for leaks, radiators blown out, fuses and pilot lights checked, electrical connection terminals tightened, motors and generators inspected and serviced, and all mounting and fastening of bolts and clamps made secure.

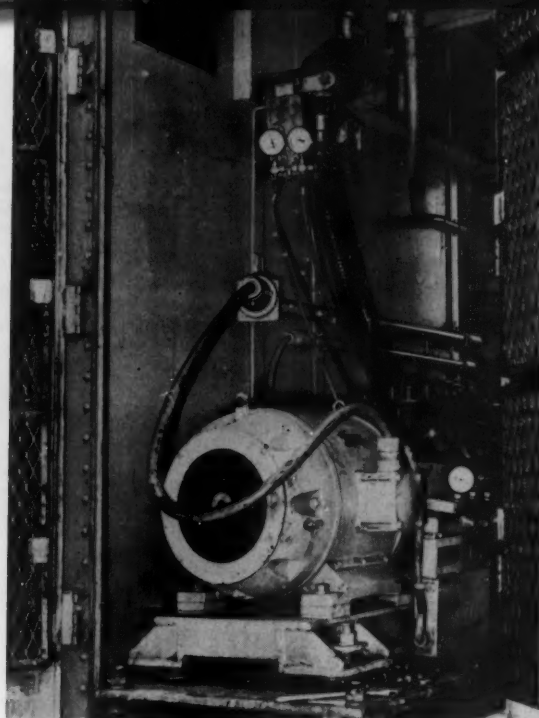
Additional work done at the time of the two-month inspection includes changing of lubricating oil in the engine and fuel injection pump, blowing out the engine radiator, cleaning the air cleaner tray, greasing generator, radiator fan, evaporator fan and compressor motor bearings, and checking the setting of safety switches.

At the time of the semiannual inspection, in addition to the work done on shorter-time inspections, injectors and injector nozzles are inspected and fuel pump and injector timing is checked.

For the annual inspection, the additional work done includes repair of racks, floors, linings, lading anchors, door seals, overhaul of running gear and brake rigging, and the sandblasting and painting of trucks and car.

The time between engine overhauls is expected to be about two years.

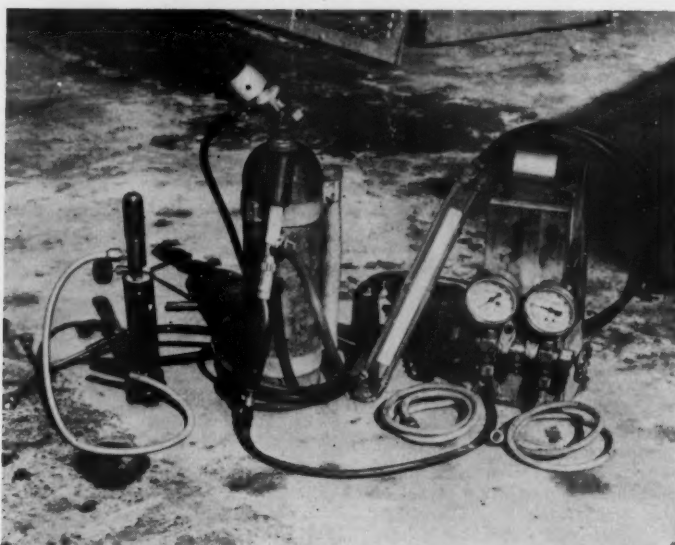
Certain special equipment is necessary for the servicing of the cars. At present the Santa Fe is using two motor-driven pumps for removing moisture and air from the refrigerating systems. These pumps must be capable of pulling a high vacuum since moisture cannot be removed unless the vacuum is more than 29.6 in.



INTERIOR of one of the engine-generator compartments.



FREON tank in tipping mount on the weighing scale.



FROM left to right, alcohol-burning leak detector, Prestolyte leak detector, manometer and manifold gage.



A 16-POINT temperature measuring device used at various points in the car.

It is necessary to remove, restore and add refrigerant to the cooling systems and for this purpose a tipping truck is used for handling freon cylinders.

A fueling tank on a truck is used for fueling cars in the overhaul yard. A larger stationary tank in the departure yard is used regularly for filling fuel tanks. An air motor-driven pump is used for filling this elevated tank.

Some foreign cars serviced in the yard are equipped with 12-volt batteries. To insure that these cars leave with fully charged batteries, there is a portable motor-generator set which receives its power from the yard standby power lines.

Instruments include a portable voltmeter for checking

generator voltage at load and no load. There is a manometer for measuring the difference of pressure between the intake and outlet of the evaporator. This is used for setting the defrost switch.

There are two halide leak detectors. One, which is of small size to allow for easy portability, employs an alcohol torch. The other, somewhat larger, uses a gas flame supplied by a tank of compressed gas.

Manifold gages are used for measuring pressures on the high and low side of the compressor and a Minneapolis-Honeywell temperature measuring device with a 16-point switch is used for measuring temperatures throughout the car and for setting superheat on the expansion valves.

Organizations

The 34th annual dinner of the **Transportation Club of St. Paul** will be held at the Hotel Lowry at 6:30 p.m., February 8. Warren W. Brown, president of the Monon, will be guest speaker.

Newly elected officers of the **Car Department Association of St. Louis** are: President, H. C. Summers, general car foreman, Nickel Plate; vice-presidents, W. C. Smith, general car foreman, Gulf, Mobile & Ohio, J. E. Walsh, superintendent car department, St. Louis Refrigerator Car Company and Manufacturers Railway, and H. T. Bramblett, foreman car department, Pennsylvania; and secretary-treasurer, E. S. Walsh, general car foreman, Terminal Railroad Association of St. Louis.

"Weed Control" will be the subject of a panel discussion at the February 14 dinner meeting of the **Mississippi Valley Maintenance of Way Club** at the Hotel De Soto, St. Louis, at 6:30 p.m. Those taking part will be C. W. Bothe, maintenance of way chemist, Santa Fe; P. M. Bernard, county extension agent, St. Louis; F. N. Beighley, roadway engineer, Frisco; and J. R. Schofield, assistant engineer maintenance of way, New York Central.



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The New York Society of Model Engineers has established a permanent file for collection and preservation of drawings and photographs of obsolete railroad motive power and rolling stock—especially old steam locomotives. The society has announced that it will welcome receipt from railroads of any such material which would otherwise be destroyed. Material may be sent to the society at Lackawanna Terminal, Hoboken, N.J.

The society's annual exhibition, in which its collection of miniature locomotives and cars is put on public display, will be held at the Lackawanna Terminal, February 11-22.

Securities

Baltimore & Ohio.—Refunding Plan.—This road has applied to the ICC for exemption from competitive bidding requirements in connection with a \$345 million refunding plan. The road informed the commission that it would give the exact amount and terms and the nature of the bonds which it will sell or exchange for its outstanding securities in individual applications to be filed if the exemption it seeks is granted. The B&O stated that it is now paying interest averaging about 4.7% on its outstanding securities and that present market conditions have led the road to consider refunding "some or all" of its securities in order to reduce the interest charges and simplify its capital structure. The B&O application stated that "the amount is so large it is believed that no more than one underwriting group could be organized and thus competitive bidding would not be feasible since competition would not be achieved." The road stated that it has held "preliminary discussions of an exploratory nature" with institutional investors and is convinced its plan cannot be worked out except on a negotiated basis.

Chicago & Eastern Illinois.—Exchange of Preferred Stock for Debentures.—The offer to exchange outstanding Class "A" stock for 5% income debentures (*Railway Age*, January 17, page 27) has been extended to March 1. Originally, the offer was to have expired January 25. Response has been "splendid" according to President C. M. Roddewig, who said the extension was requested by some stockholders who were unable to get their certificates to the exchange agent in the previously allotted time. Net earnings of the company were fully adequate to meet debenture interest payments in 1955, he said. Payments will

be made in equal amounts of \$1 on each \$40 principal amount of debentures on May 1 and November 1 for those who make the exchange.

Missouri-Kansas-Texas. — Capital Stock Reclassification.—This road has filed a revised application with the ICC in substitution for a stock modification plan filed December 31, 1952, and later held in abeyance due to opposition from stockholders (*Railway Age*, May 4, 1953, page 17). The revised plan calls for issuance of \$93,380,700 of 5%, 50-year income bonds; 667,005 shares of class A, \$60 par redeemable stock; and 808,971 shares of new, \$10 par common stock. The road's outstanding stock now consists of 667,005 shares of 7% \$100 preferred and 808,971 shares of no par common. This outstanding stock would be exchanged, and then cancelled, on the basis of one share of 7% preferred for \$140 of income bonds and one share of redeemable stock; and one share of no par common for one share of the \$10 common. The application states that the redeemable stock has no preferred dividend status but in any dividend distribution, 75% of the amount declared would be allocated to redeemable stockholders and 25% to holders of the new common stock. The road advised the ICC that its preferred dividend arrearages now come to \$150.50 per share, a total of \$100,384,252, all of which would be cancelled on consummation of the revised plan. Additionally, the M-K-T would have authorized 4,002,030 shares of the new common stock to provide for conversion of the class A redeemable stock on a six-for-one basis.

Security Price Averages

	Feb. 1	Prev. Week	Last Year
Average price of 20 representative railway stocks	86.05	83.70	61.40
Average price of 20 representative railway bonds	98.61	98.79	93.41

Railway Officers

ILLINOIS CENTRAL.—Oscar L. Grisamore, general traffic manager at Chicago, retired on pension February 1, after 44 years of service. **Howard S. Powell**, general freight traffic manager at Chicago, has been named to succeed Mr. Grisamore, with jurisdiction over freight rates, divisions, and sales and service. **Carl A. Larsen**, assistant general traffic manager at Chicago, has been promoted to general freight traffic manager, sales and service, and **Charles A. Sublett**, freight traffic manager, has been named general freight traffic manager, freight rates and divisions. **Norman E. White**, assistant freight traffic manager at Chicago, has been appointed freight traffic manager there. His successor is **Roy W. Tierney**, general freight



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agent, who in turn has been succeeded by **Arthur A. Koch**, assistant general freight agent. **Elias Lyman, Jr.**, general commerce agent, succeeds Mr. Koch and has been replaced by **T. C. Davidson**. **R. L. Anderson**, assistant to general freight agent, has been named assistant general freight agent at Chicago. **David B. Sweeney**, assistant coal traffic manager at Chicago, has been advanced to coal traffic manager.

Anderson Pace, general industrial agent at Chicago, has retired. **Walter W. Pace** has been appointed director



Howard S. Powell

industrial development and **J. S. Frost**, industrial agent, has been promoted to general industrial agent.

Mr. Powell was born at Hazelwood, Ky., and attended the Universities of Georgia and Arkansas. He began his railroad career with the Rock Island in 1920 and joined the IC in July 1926 as rate expert at Memphis. After serving as chief clerk at New Orleans, chief of divisions bureau at Chicago, chief commerce agent, general freight agent and freight traffic manager, he was named general freight traffic man-



Carl A. Larsen

ager in charge of freight rates, interstate commerce work, and related matters in August 1953.

Mr. Larsen began his IC career as stenographer in 1925 in the traffic office at Sioux City, Iowa, his birth-

place. After serving in various capacities, he was named general freight agent, assistant freight traffic manager at Chicago and freight traffic manager



Charles A. Sublett

at St. Louis, consecutively, becoming assistant general traffic manager at Chicago in August 1953.

Mr. Sublett was born at Farina, Ill., and joined the IC in the local freight office at Chicago in 1916. After serving in various other capacities, he became traveling freight and passenger agent at Carbondale, Ill., office manager, general freight agent, and assistant freight traffic manager at Chicago, successively. Mr. Sublett was named freight traffic manager in August 1953.

READING.—**R. A. J. Morrison**, director of personnel, has been appointed assistant vice-president, operation and maintenance, with headquarters as before at Philadelphia. **H. F.**



Robert A. J. Morrison

Wyatt, Jr., superintendent of personnel, succeeds Mr. Morrison as director of personnel and has been replaced by **J. T. Sturman**, personnel assistant.

Mr. Morrison was born at Cincinnati, December 12, 1898, and received a Ph.B. degree from Yale Sheffield Scientific School in 1920. He entered railroad service with the Baltimore & Ohio in July 1921 in the division engineer's office. In October 1950 he

joined the Reading as assistant general manager, becoming director of personnel in April 1952.

SOUTHERN.—**Ralph H. Graham**, trainmaster at Danville, Va., has been appointed assistant to general superintendent transportation at Charlotte, N.C., succeeding **William N. Harper**, retired.

Joseph P. Cook, commerce counsel at Washington, D.C., has retired and has been succeeded by **James L. Tapley**, law assistant.

J. Russell Price, general agent at Detroit, has been promoted to general traffic agent there, succeeding **Roland C. Semon**, who retired January 1, after nearly a half-century of service with the Southern.

Halbert A. Hudson, signal and electrical superintendent at Cincinnati, has been appointed assistant to vice-president, with jurisdiction over signal and electrical affairs, at Washington,



Halbert A. Hudson

D. C. Mr. Hudson succeeds the late **L. C. Walters** (*Railway Age* January 10). **Leonard C. Brown**, assistant engineer, signal and electrical department, at Washington, succeeds Mr. Hudson as signal and electrical superintendent at Cincinnati.

Charles M. Little, assistant to general solicitor at Washington, D.C., has been promoted to assistant general solicitor. **James I. Hardy** and **Arnold B. McKinnon**, solicitors, have been named assistant general solicitors. **James G. Gidding**, solicitor, has been promoted to assistant general tax attorney.

OBITUARY

Edward L. Crimmen, 74, retired assistant general manager of the **Minneapolis & St. Louis**, died January 20 at St. Petersburg, Fla.

Harry J. McDonald, 64, vice-president and assistant to president of the **Nickel Plate** at Cleveland, died January 19 in that city.

Llewellyn F. Shedd, 85, retired superintendent of safety of the **Rock Island**, died January 27 at Chicago.

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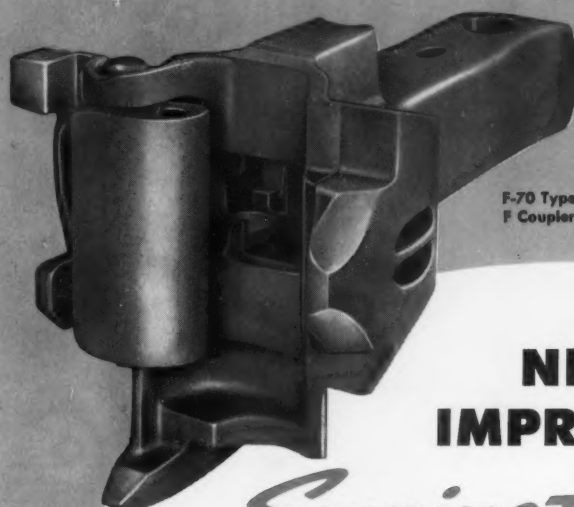
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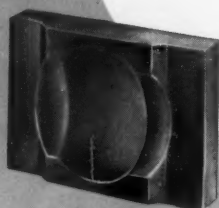


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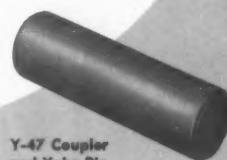


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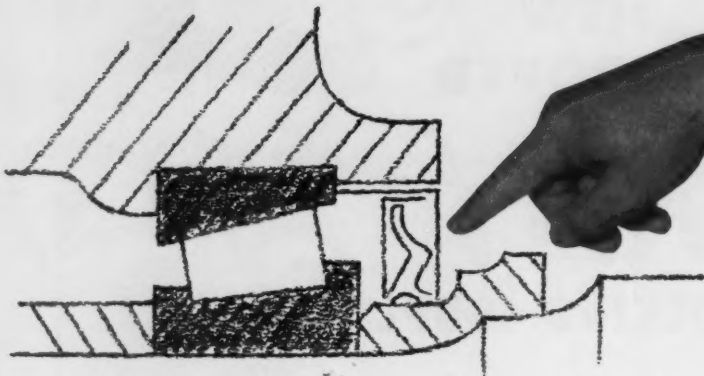
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